Charles University in Prague

Faculty of Social Sciences

Institute of Economic Studies

Master thesis

Microfinance institutions, an empirical study from Moldova.

Author: **Roman Gorgan**

Supervisor: **PhDr. Pavel Streblov**

Academic year: **2011/2012**

Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

The author grants to Charles University permission to reproduce and to distribute copies of this thesis document in whole or in part.

Place_____

Date _____ ___ _____

Signature

ABSTRACT

The present master thesis deals with non-banking microfinance institutions and examines its abilities and role in the poverty alleviation process.

It is more than necessary to pay attention to the rural sector and its development as any successful transition of the economy requires transition of the rural sector as well. In many transition economies people in the rural areas continue to live on the edge of poverty, engaged in subsistence agriculture and remain susceptible to wide range of shocks. In such countries rural population unlike urban one did not benefit to the same extend from transition and need special attention and supporting policy measures.

Because of low penetration rate of microfinance institutions into rural areas, lacking or insufficient size of collateral, financial illiteracy many poor but active man face problems to obtaining finance for the development of new income opportunities.

In this context the master thesis emphasizes the role of savings and credit associations, which unlike the commercial banks operate mainly in rural sector, have the most significant effect on poverty alleviation.

Finally, the author analyses the activity of 3 non-banking microfinance institutions of the Republic of Moldova and uses publicly available data to calculate the outreach, efficiency and financial stability indicators.

Keywords: microfinance, microfinance institutions, savings and credit associations, empirical study, the Republic of Moldova.

Contents

List of figures

List of tables

List of boxes

List of abbreviations

CGAP	Consultative Group to Assist the Poor
DFID	UK Department for International Development
IDA	International Development Agency
MFI	Microfinance Institution
PEARLS	Financial performance monitoring system proposed by WOCCU
RISP	Rural Investments and Services Project
USAID	United States Agency for International Development
SCA	Savings and Credit Associations
WOCCU	World Council of Credit Unions
USAID	United States Agency for International Development
RFC	Rural Finance Corporation

1. INTRODUCTION

"More than 500 million of the world's economically active poor run micro and small businesses. But less than 5 percent have access to financial services"[1].

In the absence of formal financial sources a number of informal community-based and/or alternative financial instruments have developed to meet financial needs of the poor. A notable number of microfinance organizations have been created over the past 10-20 years with the purpose to support such micro businesses and companies.

The development of the microfinance sector is a historical global effort to fight the poverty. "The industry has overturned the established status of the poor as consumers of financial services, shattered stereotypes of the poor as not bankable, spawned a variety of lending methodologies demonstrating that it is possible to provide cost-effective financial services to the poor, and mobilized millions of dollars of s*ocial investment* for the poor"(Mutua, et al. 1996).

Rapid development of the microfinance institutions and services during past decades was driven, first of all, by poverty alleviation objectives. By targeting the poor layers of the population the microfinance organizations not only contributed to the poverty alleviation, but stimulated a steady development of the entire microfinance sector.

There are different types of microfinance institutions operating under different conditions and having different goals. Some microfinance institutions are "financially minded" and the other ones are "socially minded" (Morduch, 2000). Furthermore, it is worth mentioning the Woller's "*welfarists"* and "*institutionists"* classification of microfinance institutions where "both approaches work for a social goal - the difference is in their methods" (Woller et al. 1999).

According to Woller et al. (1999) the main goal of welfarists is concerned with the terms outreach and impact, in other words that their clients are among the poorest and that they benefit socially from participating in the program. The welfarists tend to think that raising interest rates will make the loans too expensive to poorer clients and limit the access to capital. Institutionists, on the other hand, focus on setting interest rates

[1] Judith Brandsma and Laurence Hart, Making Microfinance Work Better in the Middle East and North Africa, World Bank report, p.5

high enough to cover all costs and create financial sustainability, without being too concerned about *who is reached (*Morduch, 2000). The financially orientated institutions hold the view that the best, if not the only, way to serve the poor is to have a stable financial output: The microfinance institutions must be able to cover all of their own costs. Robinson (2001) points that successful institution, following the poverty lending approach, in aggregate, can meet only a small portion of the demand for microfinance.

Richard Rosenberg, being an excellent representative of the institutionalism approach, comments on why microfinance institutions (MFIs) should care first and foremost about their financial sustainability:

"Some people treat this question as if it comes down to a value judgment: which do you care more about - poor people or profits (...or financial systems...or neoliberal ideology). To avoid any such confusion, let's assume that the only objective we care about is maximizing benefit to poor people. From this perspective, the argument for high interest rates is straightforward. In most countries, donor funding is a limited quantity that will never be capable of reaching more than a tiny fraction of those poor households who could benefit. We can hope to reach most of those households only if MFIs can mobilize relatively large amounts of commercial finance at market rates. They cannot do this unless they charge interest rates that cover the costs..."

(CGAP and Rosenberg, 2002)

The second chapter of the thesis describes institutional and functional peculiarities of the microfinance industry. The chapter answers the following questions:

- What is microfinance?
- Why is microfinance industry growing?
- What role donors play in microfinance?

In addition, the microfinance clientele, products and services, microeconomic aspect, and role of the microfinance institutions are revealed.

The third chapter determines the benchmark for further empirical analysis of the microfinance industry competitor environment. The attention is paid to the outreach, financial stability and efficiency indicators.

After elaborating on the theoretical base for microfinance institutions assessment, in the chapter four the analysis of the microfinance sector of Moldova is carried out. Finally, a detailed description of three microfinance institutions which occupy 70 % of the industry is made.

2. THE MICROFINANCE ESSENCE

2.1. What is microfinance?

"Microfinance is the provision of financial services such as savings, deposit, and credit services to the entrepreneurial poor" (Brandsma and Hart 1998)

One can think of *microfinance* as of financial services aimed at supporting the poor via informal and formal arrangements at the most "bottom" micro level. Main target group for microfinance are poor, economically active entrepreneurs from rural areas which lack finance for business development. Some MFI clients may be recipients of micro-loans for entrepreneurial purposes while others can only place free money on the deposit or benefit from other services.

According to Ledgerwood (1998) microfinance activities and services usually involve:

- Small loans, typically for working capital;
- Informal appraisal of borrowers and investments;
- Substitutes for collateral such as group guarantees or compulsory savings;
- Access to successive and larger loans based on repayment performance;
- Streamlined loan disbursement and monitoring;
- Secure voluntary savings products.

MFI can be organized as a non-governmental organization (NGO), savings and loan cooperative, credit union, government bank, commercial bank, or non-banking financial institutions. Microfinance clients are typically self-employed and/or low-income entrepreneurs in rural and urban areas. At most their activities provide a stable source of income, however they are not considered to be the poorest of the poor. (Dunford 2001).

In 1980's microfinance begins as *bridge* between state and poor farmers via credit subsidies. It was assumed by the Governments and other donors that the poor required the access to cheap credit which in turn will allow for the optimization of agricultural production by small landholders. In the same time Credit Unions were created by donors benchmarking the "Raiffeisen model"[2] to provide subsidized agricultural credit. Credit Union was aimed mostly for savings mobilization in rural areas along with an

[2] Raiffeisen model- is a model under which early Saxonian credit unions were functioning.

attempt to educate poor farmers how to save (Dunford 2001).

2.1.1. Why is microfinance growing?

Following Ledgerwood (1998), the microfinance sector is growing for several reasons:

- The promise of reaching the poor;
- The promise of financial sustainability;
- The potential to build on traditional systems;
- The contribution of microfinance to strengthening and expanding existing formal financial systems;
- The availability of better financial products as a result of experimentation and innovation.

Microfinance activities help to raise the institutions which are financially self-sufficient, subsidy-free and generate stable income. Services provided are flexible with affordable price to microenterprises and have a sustainable pattern. Furthermore, microfinance activities strengthens already existing formal financial institutions, which are savings and loan cooperatives, credit union networks, commercial banks, by extending their markets for both savings and credit and their profitability. The problem of lack of collateral can be solved by using the group approach together with each individual specific. In addition, the above techniques allow for the microfinance services to be more attractive to a large number of low-income clients (Ledgerwood, 1998)

2.1.2. What role donors play in microfinance?

Donor's interest in microfinance has increased substantially over the past years. Main donor "player's" on the microfinance sector are: DFID, CIDA, SOROS Foundation, USAID, GIZ and others. The donors, along with the Governments, local and international NGOs, support microfinance activities in some way, providing on the same basis the following services:

- Grants for institutional capacity building
- Grants to cover operating shortfalls
- Grants for loan capital or equity
- Concessional loans to on-lending

- Lines of credit
- Guarantees for commercial funds
- Technical assistance.

While donors are the main contributors of microfinance process, the methodology they apply to microfinance and the rules they set for MFIs regarding funding, can greatly affect the development of the field of microfinance. The majorities of donors has moved away from subsidized lending and are focusing more on grants for institutional capacity building and the provision of the capital (Ledgerwood, 1998).

2.2. Determination of microfinance clients.

The clientele of MFI's consist of those who experience difficulties to access the financial products and services. The difficulty of accessing the capital is due to mainly high operational costs, and a variety of risk factors. The client based in the rural area, for example, has few assets and experiences difficulties with enforcement of formal property rights and other contracts due to expensiveness and uncertainty. If the Microfinance institutions want to deal with the categories that face such issues it needs to be innovative and flexible through a number of techniques such as "group lending" (Morduch 1999).

According to Morduch (1999), the "Group lending" and Microfinance has become closely associated in such regions as China, Russia and Eastern Europe. Group lending itself is the way of working in small groups (three to ten neighbors) of clients where loans are disbursed to individual members, but the group as a whole is jointly responsible for loan repayment. Nearly all of the theoretical and economical work on microfinance sector focuses on the incentives forced by a joint liability in group lending contracts built on lending models founded by microfinance leaders like Grameen Bank[3] in Bangladesh and Bolivia's BancoSol[4].

[3] **Grameen Bank-** Established in 1976 by Prof. Muhammad Yunus. The primary scope was to evaluate the possibility of creating a credit disbursement system aimed to provide banking services to the rural poor. Web address: http://www.grameen-info.org.

[4] **BancoSol-** Established in1984 as a non-profit organization which supported the development of microenterprises. Nowadays it is functioning as a bank that offers a opportunities to the lowest-income sectors, providing high-quality and integrated financial services in Bolivia. Web address: http://www.bancosol.com.bo.

Group lending seems to be quite reasonable because it takes a group of borrowers and shifts the risk of the loan from the bank to the particular group, thus borrowers have an incentive to choose only quality borrowing partners as they are share the responsibility for one another's loans. In order to avoid the risk and other difficulties with small scale credit contracts, the group lending is conducted by peer monitoring, social ties, and Group pressure. Floro and Yotopoulos (1991) mention that due to these ties, members may have better information to monitor and can more easily pressure for repayment. However, Wydick (1999) points to the problem which arises when family or friends may have less incentive to use pressure for fear of losing family or friends, which in such cases is valued higher than losing money.

2.2.1. Gender targeting-targeting women

The lack of affordable credit prevents "natural talent in every people, if not every person" from realizing economic benefits of that talent (Banerjee, 2000). Micro-finance programs believe that women indeed have these "natural talents" but have been historically constrained by a variety of economic, social, political and cultural factors (Banerjee 2000).

Abhijit Banerjee (2000), in his work "*Contract Theory in Development Economics*," describes five reasons which prevent the poor from "making the best use of their natural talents." Micro-finance programs targeted towards women seek the relaxation of traditionally binding constraints in the context of many developing countries. These constraints for women include: coordination failure talent must be combined with the "appropriate inputs"; and behavioral economics "people may not always seek out the best options because they are held back by psychological constraints or social norms" (Banerjee, 2000).

In microfinance theory it is believed that supplying women with credit for micro enterprises at the same time will diminish financial constraints and improve socio-cultural and economic status of women, in other words "empowering" them and allowing for self-sustainability (Mayoux, 1995).

The relation between microfinance and gender will be changed and women will benefit from it (Bayes 1999). Women will gain greater control over available resources and

improve their status in household decision-making (Sharma 2001).

To better understand the term "targeting women" in microfinance, we could refer to studies conducted by Rahman Animur (1999) and Pit et al. (1998). The approach introduces the supply side and demand side reasoning. Rahman conducts the ex-post analysis where he investigates Grameen banks public and hidden goals for targeting women. The ex-post analysis explained the Bank's success in having 2.02 million members in 1994, out of which 94% were women. Following Rahman (1999) study, the two objectives could be noted which determine the gender approach to credit **supply-side**:

- Credit for women increases their income which is in turn positively reflected on the households socio-economic parameters; and
- The target groups which consist mainly from women strengthen their solidarity through regular meetings and allow them to improve social and economic empowerment in society.

Rahman (1999) notes that Grameen bank model was reasonably excluding men from its programs, and the reasons are the following:

- Targeting women is strategic for the bank due to repayment problems while lending to men;
- Women regularly attend the group meetings being vulnerable from a certain prospective. Such vulnerability was identified as limited physical capabilities and their cultural standing and behavior in the society;
- The women from a rural society in Bangladesh are in general modest and honorable that makes women's honor more vulnerable in society.

The **demand-side,** described by Pitt and Khandker (1998), show the nature of group-based lending and its attractiveness to women in rural Bangladesh and/or other low-income sectors and societies. A few points could be outlined:

- Limited amount of women participate in wage labor market in rural Bangladesh;
- Due to pregnancy, illness associated with a birth of a child and care of the household members women are more vulnerable.

2.3. Microeconomic aspect of microfinance

2.3.1. Asymmetric Information, Transaction Fees, and Support to MFIs[5]

Asymmetric information between financial institutions, their clients and government, and transaction costs, are the main characteristics of microfinance. These two factors being instruments of welfare policy can eliminate the lump-sum transactions allowing for the most efficient initiation of a financial institution which is reflected in a welfare improvement of poor layer of society. Hardy et al. (2002) consider two periods: t_1 and t_2 where every individual has the same welfare level. It is assumed that the individual has a risk averse utility function which is dependent on consumption C_t, assuming that time discount is zero.

$$U = U(C_1) + U(C_2),\ U' > 0, U'' < 0 \tag{2.1}$$

Income of an individual in each period is considered as y_t, and results in a fixed base income denoted as $\bar{y}$ and a random term e_t, such that $e_1 = -e_2$ which writes off any negative shock in period two The time discount is defined to be zero, which allows to consider that any positive shocks are equally divided between two periods, the random shock is normally distributed over [0,1]. In such a way the individuals can be grouped or ordered by an increasing error term e, which can be used as an index, thus the time factor is omitted. The consumption of an individual equals to its income when there is no financial institution, in this case the individual have no incentive or possibility to save or borrow. The utility of individual then takes the following form:

$$U_e = U(\bar{y} + e) + U(\bar{y} - e). \tag{2.2}$$

After defining time frame individuals and utility function, Hardy et al. (2002) introduce microfinance institution (MFI) which offers for those who had positive shock to save in first period and to lending for those who had negative shock in first period.

[5] The theoretical aspect and the calculations are not authors own. This sub-chapter is inspired from IMF working paper # WP/02/159 "Microfinance institutions and public policy" leaded by Daniel C. Hardy, Paul Holden, and Vasili Prokopenko (2002).

Individuals who saved in first period can use their deposits to maintain low income in second period, and borrowers can repay their loans. To achieve the inter-temporal smoothing Hardy et al. (2002) assume that the interest rate is zero, but the MFI charges a fee (ʃ) to cover its fixed costs in both periods. After observing their individual shock (e), an individual will decide to incur the transaction cost and save(s) in one period and borrow the same amount in the other period. In such a way, the client's utility becomes:

$$U = U(\bar{y} + e - s - f) + U(\bar{y} - e + s - f). \tag{2.3}$$

The optimal choice of *s* is such as to just offset the shock e, and to smooth consumption, thus the utility of those individuals who participate in the financial system is:

$$U = 2U(\bar{y} - f) \tag{2.4}$$

Hardy et al. (2002) notes that if ʃ is not too large, there will exist a shock e^* such that all individuals suffering a greater shock will use the financial system to smooth consumption. And those experiencing a smaller shock will not. The break-even point is where the utility of variable consumption is equal to that smooth consumption at a level reduced by the transaction fee:

$$U(\bar{y} + e^*) + U(\bar{y} - e^*) = 2U(\bar{y} - f) \tag{2.5}$$

Thus, Hardy et al. (2002) define the total welfare as:

$$W = \int_0^{e^*} \left(U(\bar{y} + e) + U(\bar{y} - e)\right) de + \int_{e^*}^{1} 2U(\bar{y} - f) de$$
$$= \int_0^{e^*} \left(U(\bar{y} + e) + U(\bar{y} - e)\right) de + 2(1 - e^*)U(\bar{y} - f).$$

The MFI has to cover fixed costs F in each period through its uniform transaction fee on the (1-e^*) of the population who are its clients, thus:

$$f = \frac{F}{1 - e^*} \tag{2.7}$$

In case the government cannot verify the situation and determine who receives a positive shock in particular period, it cannot offer its income support to those who needs it the most. In such a way, the government provides a lump-sum transfer, which rises $\bar{y}$ for both periods.

The effect of welfare is then:

$$\frac{dW}{d\bar{y}} = \int_0^{e^*} \left(U'(\bar{y}+e) + U'(\bar{y}-e)\right)de + 2(1-e^*)U'(\bar{y}-f) + (U(\bar{y}+e^*) + U(\bar{y}-e^*) - 2U(\bar{y}-f))\frac{de^*}{d\bar{y}}$$

, (2.8)

Where $(\bar{y}-f) - 0$ (according to (2.1))

In order to reduce the transaction fees, Hardy et.al (2002) consider the provision of support to the MFI which covers at least a part of its fixed costs, and reduces the transaction fees. A bank receives a capital grant, invests the grant and uses the returns to cover part of the fixed costs. The effect of welfare then can be measured by considering the negative of the marginal effect of an increase in fixed costs F:

$$-\frac{dW}{dF} = 2(1-e^*)U'(\bar{y}-f)\frac{\delta f}{\partial W} - \left(U(\bar{y}+e^*) + U(\bar{y}-e^*) - 2U(\bar{y}-f)\right)\frac{\partial e^*}{\partial F}. \quad (2.9)$$

The last term in brackets is zero, thus the equation is reduced to:

$$-\frac{dW}{dF} - 2U(\bar{y}-f)\left(1 + \frac{F}{(1+e^*}\frac{\partial e^*}{\partial F}\right). \quad (2.10)$$

Finally, the difference between (10) and (8) takes the following form:

$$-\frac{dW}{dF} - \frac{dW}{d\bar{y}} = 2e^* * U'(\bar{y}-f) - [U(\bar{y}+e) + U(\bar{y}-e)]_0^{e^*} + \frac{2U'(\bar{y}-f)F}{(1-e^*)}\frac{\partial e^*}{\partial F}, \quad (2.11)$$

Following Hardy et.al. (2002), the below findings could be noted:

- The Government could provide the income smoothing of an individual if it had the precise information about who was suffering a negative shock in each period and the magnitude of such shock;

- An individual can choose to smooth its income via borrowing or saving with an MFI or not to use MFI services at all;
- Direct transfers would be more efficient and accessible if the MFI did not charge a flat transaction fee, but rather make the fees proportional to transaction volume;
- Individuals have a low utility function as fixed transaction fees restrict the access to MFI services;

2.4. Role of Microfinance institutions

Microfinance institutions proved to be an efficient way to reach the poorest and make them wealthier. Savings and credit organizations take part of microfinance sector and play a remarkable role in rural economy being a proxy between MFIs and poor, in such a way the goods-to-goods exchanges were substantially decreased. Via small loans provided by microfinance organizations simple farmers were able to feed their families and buy the necessary equipment to cultivate lands and develop rural commerce.

The opportunity was given to many people through microfinance industry, providing the access to financing sources and creating new working places.

It is necessary to mention that savings and credit organizations could create a negative impact when beneficiaries and even SCA management have low financial schooling and low experience. Such problem can be solved through better schooling, and regular rise of the management's knowledge in how to evaluate the credit requests, the selection of clients, and determination of reasonable collateral.

2.4.1. Food security and rural poverty alleviation

In most rural areas of developing countries, the goal of achieving household food security remains a critical objective. Strengthening the food security can be achieved by increasing agricultural productivity and by improving the ability of households to have the stable income (Zeller et al. 1997). In turn, Von Braun et al. (1992) argues that the contribution of rural finance within the Framework of Development Policy for food security at the household level, is defined in its most basic form as access by all people

at all times to the food needed for a healthy life.

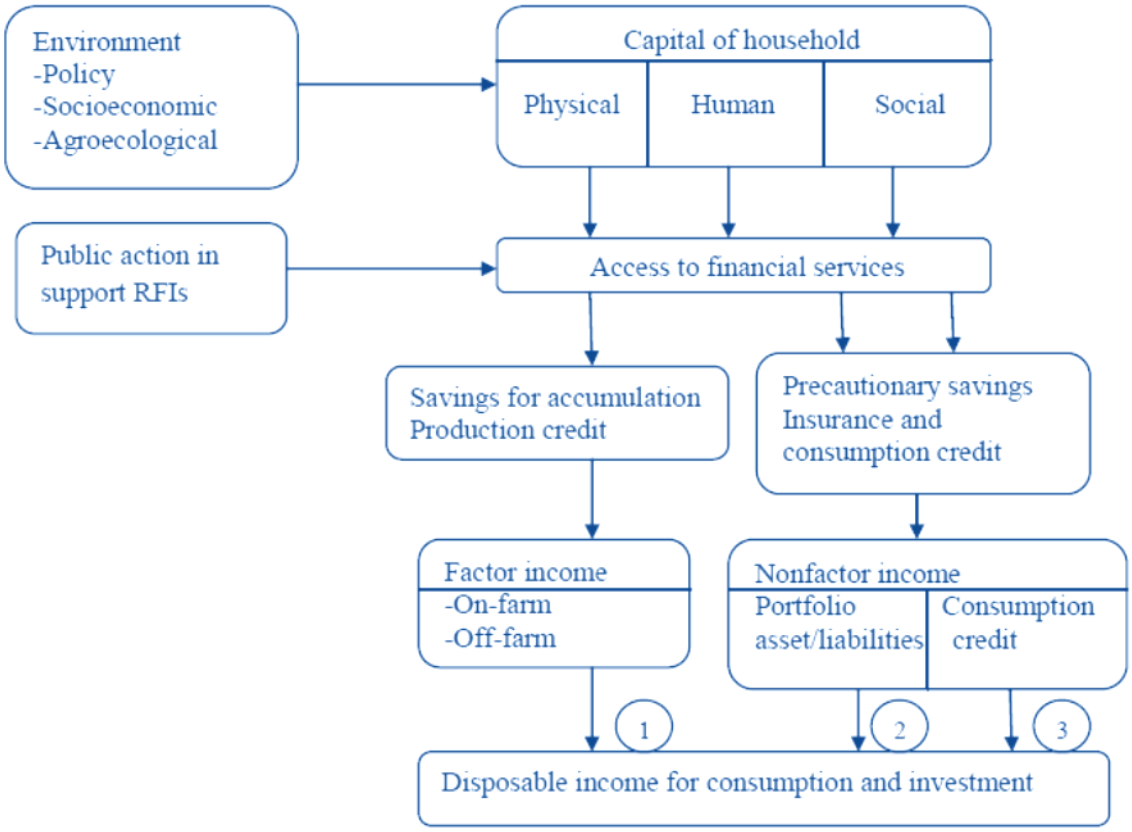
The instruments can be systematized into policies that (i) increase household income; (i) maintains food prices; or (iii) improve the households' access to financial markets. (i) And (ii) policies are aimed towards increasing household income and purchasing power. Long-term food security can be achieved by the sharing technology, education, health insurance, social services and investments into rural areas. It is worth mentioning that improvement of households' access to financial market aims to strengthen the households' ability to maintain its consumption and investment over periods through access to savings, credit, and insurance services (Zeller et al. 1997).

Zeller et al. (1997) distinguishes three pathways through which access to financial services can increase the income and the food security of households and their individual members. The pathways provide a framework for identifying institutional characteristics that allow the poor to access the credit; savings and insurance services (see Figure 1):

- Pathway 1: Income generation,
- Pathway 2: Asset investment strategies to smooth disposable income over time at sufficient food consumption levels, and
- Pathway 3: Direct use of credit to finance the necessary consumption.

The pathways are mainly characterized by the effects of access to additional capital which can enhance the level of productive human and physical capital and will allow the household to access savings and insurance services (Eswaran and Kotwal 1990). Additional capital reduces the costs of technology and assets with respect to family labor. Instead of growing low-yielding local crop varieties with a low level of mineral fertilizer, access to credit may allow an increased use of improved seeds and fertilizer and higher crop output per unit of labor and land (Feder et al. 1985). In addition, the pathways highlight the importance of financial products that are adapted to the local socioeconomic and agro ecological conditions.

Figure 1: How does access to finance influence household food security.



Source: Zeller, M and Meyer, R. L (2002): The triangle of microfinance.

3. MEASURING THE PERFORMANCE OF MFI'S

Various sources define performance indicators on more or less the same basis, however there are differences which can lead to wrong understanding of the real situation. There financial analysis of microfinance institutions is often used by:

- Donors;
- Practitioners;
- Consultants;
- Auditing companies;
- Researchers;
- Other users.

There are various factors and types of indicators that must be taken into consideration in order to analyze the real performance of particular MFI. The most important performance indicators are:

- Financial sustainability ratios;
- Financial efficiency ratios;
- Portfolio quality ratios.

Ledgerwood (1998) states that ratio comparison over a certain period of time is referred as *trend analysis (p.205)*. Trend analysis allows determining the growth or decrease tendency.

In such a way, the Framework for Financial ratio analysis is taken into account. There are various models and techniques which help to standardize the financial analysis of MFI. According to Salzmann and Salinger (1998), the worldwide performance standards are presented in Box 1.

BOX 1: Performance standards and Variations

- ACCION with its CAMEL system.
- *Micro Banking Financial Review* funded by CGAP and World Bank.
- BASE Kenya "Micro Finance Institution Monitoring and Analysis system" funded by the Department for International Development (DFID).
- PEARLS rating system funded by USAID.
- **The Framework of Financial ratio analysis of Microfinance institutions conducted by the Small Enterprise Education and Promotion Network.**
- Other guides.

3.1. Outreach

Outreach simply is the number of clients who had received the loan or other service from a microfinance institution. In order to measure outreach we need to look in to different dimensions (Richard Meyer 2002).

Outreach could be measured using the following aspects: *(i) depth* (the value attached to the gain from the use of the micro loan by a certain borrower; *(ii) worth* (is the interest rate reasonable? What would be a break-even point the borrower would be willing to pay); *(iii) cost of outreach* (the optimal interest rate for the borrower); *(iv) breadth* (beneficiaries), *length* (Time required for a microfinance institution to generate a loan); and *(v) scope* (The contracts diversity offered by a microfinance institution) (Navajas et al. 2000).

However, outreach can be measured in a simplified way, taking into account just *breadth* and *depth* aspects (Lafourcade et al. 2005).

3.2. Performance indicators

A microfinance organization earns revenue mainly from loans and other financial services charging certain interest fees, penalties, commissions etc., investment income shouldn't be omitted. Profitable institutions are characterized by a positive net income and good capacity (revenue and equity). In order have more objective view on overall financial performance, financial revenue and expense indicators are compared against the institution's equity and assets (Lafourcade et al. 2005).

Efficient institutions reach large number of poor people with minimum costs of delivering services (Dunford 2006 and Cull et al, 2007). The efficiency of an MFI can be calculated in various ways. According to Lafourcade et al (2005), *operating expense ratio, costs per borrower* and *costs per saver* can be used as main efficiency indicators. Cost per unit of currency lent and cost per loan made is also considered as efficiency indicator (Ledgerwood 1996, appendix 1-3).

Productivity indicators are often measured in terms of (i) number of active borrowers per credit officer, (ii) portfolio outstanding per credit officer, and (iii) total amount lent in the period per credit officer. Productive MFIs maximize services with minimal

resources, including staff and funds (Lafourcade et al 2005 p.11).

3.2.1. Portfolio quality

The most important asset of an MFI which should be taken into consideration is its gross loan portfolio (Balas 2009). Portfolio quality is important to the financial stability and growth of any microfinance institution. The decrease in portfolio quality could mean a decline in customer satisfaction and, therefore, may result in higher costs to recruit new clients. Decreases in portfolio quality may also signal the MFI exposure to risk and problems in staff supervision and control. In any case, poor asset quality will result in additional costs and may lower income.

Various ratios are used to measure the portfolio quality. In order to make some classification Ledgerwood (1998) divide them into two most important categories of signalizing indicators, which are:

- Repayment rates;
- Portfolio quality ratios.

Repayment rate is often used by Donors and MFIs itself. The ratio is used mainly to reflect the payments received with respect to amount due. Ledgerwood (1998) points that the ratio measures the *historical rate of return* rather than the *quality* of the loan portfolio.

If the FMI is growing rapidly with significant amount of long-term loans, calculating the repayment rate will be misleading. In this case, the rate will be relatively low because the amount received will be much lower than the amount due. The ratio is calculated as follows:

$$\text{Repayment rate} = \frac{\text{Amount received}}{\text{Amount Due}} \tag{3.1}$$

It has to be mentioned that amount received (the numerator) needs to be adjusted for prepayments and past due amounts and the Amount due (the denominator) needs to be adjusted for already existing past due amounts.

The prepayments lead the repayment rate to lose the accuracy and usefulness, therefore in order to remove the effect of prepayments and show the actual rate of payments with respect to expected payments taking into account past due amounts, Ledgerwood (1998) defines the equation as:

$$\text{Repayment rate} = \frac{\text{Current ammount due} - \text{prepayments}}{\text{Total current amounts due}} \tag{3.2}$$

3.2.1.1. Portfolio quality ratios

Barres et al. (2005) defines Portfolio at Risk (PAR) ratio as the risk for future losses according to performance of the loan portfolio. The PaR ratio is the most reliable indicator of the loan portfolio performance. To identify the loans with the highest risk, PaR > 30 days is mostly used. If the client has delays in repayment schedule, the ratio is used as an effective measure to indicate the high level of client risk level.
The Portfolio at Risk is calculated as follows:

$$\text{PaR} = \frac{\text{Outstanding balance of loans with payments past due}}{\text{Gross Loan Portfolio}} \tag{3.3}$$

The ratio should be low and fairly stable, and managers should monitor it daily using the PaR>1 day as it allows for an accurate monitoring of repayments and prevents the risk of default.

In contrast to effective monitoring, the PaR ratio does not provide complete information regarding the cause of delay in repayments, for this reason management of an MFI is in charge to calculate the percentage of *written-off PaR*[6]. If the percentage is quite high, it indicates the delinquent loans collection problem. Barres et al. (2005) indicate that in case the MFI writes off the PaR too quick, the indicator loses its significance and creates uncertainty. The write off ratio is calculated as follows:

$$\text{Write off Ratio} = \frac{\text{Value of Loans Written Off}}{\text{Average Gross Loan Portfolio}} \tag{3.4}$$

[6] Written off PaR is the percentage of the loans that were removed from the balance of the gross loan portfolio as being unlikely to be repaid. (Ledgerwood 1998)

It is worth to stress that the number of delinquent borrowers relative to the volume of delinquent borrowers is a useful indicator of portfolio quality. If there is a significant volatility in the size of disbursed loans, in order to maintain the portfolio quality it is helpful to know whether the smaller or larger loans result in higher delinquency (Ledgerwood 1998). The equation is as follows:

$$\text{Deliquent borrowers} = \frac{\text{Number of delinquent borrowers}}{\text{Total number of active borrowers}} \tag{3.5}$$

If the above ratio is lower than PaR ratio, it indicates that the larger loans are more problematic than smaller ones.

3.2.1.2. Productivity and efficiency indicators

Efficiency ratios measure the cost of providing services to generate loans Ledgerwood (1998). Efficiency indicators mainly relate to operating costs and do not include provisions for loan losses and financing costs. The average portfolio outstanding is taken into consideration while assessing the *operating costs* of an MFI that provides only credit services (Schneider 2007).

The ratio is calculated as follows:

$$OER - \frac{Operating\ costs}{Average\ portfolio\ outstanding} \tag{3.6}$$

Following the *The Microbanking bulletin*[7] the average OER of MFIs in the Eastern Europe is about 30 percent. An MFI can gain more efficiency by decreasing the amount of smaller borrowers, as small loans are more costly e.g. five loans by $150 against one loan by $100 thousands. Thus the young MFIs look less efficient.

[7] Issue No. 23, May 2011—Eastern Europe benchmark.

3.2.1.3. Profitability indicators

The most often used measures of profitability are *Return on Equity (ROE),* which measures the returns produced for the owners, and *Return on Assets (ROA),* which reflects net income earned on the assets (Ledgerwood 1998).

Return on Assets (ROA) indicates how well an MFI is managing its assets to optimize its profitability. The ratio includes the return on the portfolio and all other revenue obtained from investments and other operating activities. Many researchers use ROA as a good instrument to compare commercial and noncommercial MFIs. Institutions which maintain a significant value of the assets in the Gross Loan Portfolio typically have a high and positive ROA. Following Ledgerwood (1998), the ratio could be defined as Net income to Average assets. It is notable that Non-commercial MFIs with lower debt-to- equity ratios can show a slightly higher ROA than commercial ones due to lower taxation and financial expenses (Barres et al. 2005). In such a way, the Taxes are subtracted from net operating income which makes the ratio more precise and useful, thus the ROA takes the following form:

$$ROA = \frac{\text{Net operating income} - \text{Taxes}}{\text{Average assets}} \tag{3.7}$$

Return on Equity (ROE) is the most significant profitability indicator; it measures the ability of a MFI to pay interest on shareholders investments (Tonchia 2010). ROE reveals the ability of an MFI to adjust total equity with retained earnings; in turn, increased equity enables the MFI to increase its creditworthiness and to attract additional financial sources to maintain and grow its portfolio. Donations and revenue from non-operating activities are not taken into consideration while calculating the ratio, which guarantees that the ratio is a reliable indicator of institution's ability to generate net income from its main activity (financial) (Ledgerwood 1998). Finally, ROE is a reliable indicator of how the retained earnings are used to generate equity become sustainable. Taxes are subtracted from the ratio in order to have a reliable and precise measure. Thus the return on Equity takes the following form:

$$ROE = \frac{\text{Operating Income} - \text{Taxes}}{\text{Average Equity}} \tag{3.8}$$

3.3. Operational self sufficiency

Performance of an MFI can be defined looking at *financial sustainability* indicators. Meyer (2002) notes that it is more efficient to have a constant financing source allowing to keep enough work capital to have profit on permanent basis for a microenterprise and/or household. A one time or short term loan in general does not increase the welfare of the household or an individual (Navajas et al., 2000). It is crucial for a MFI to maintain clean financial accounts, income and expenses transparency (Meyer 2002).

Most MFIs define *operational self-sufficiency (OSS)* as the sufficiency of operating income to cover operating costs (salaries, supplies, other administrative costs) along and the provision of loan losses (Ledgerwood 1999, p.217).

MFIs define the OSS as:

$$OSS = \frac{\text{Operating income}}{\text{Operating expences} + \text{financing costs} + \text{provision for loans losses}} \tag{3.9}$$

Following Barres et al. (2005), the breakeven point of an MFI operation is 100 percent. If the institution reaches the 100 percent breakeven point, it should not have the lower OSS, as the indicator does not tend to have high volatility in comparison to other indicators and the positive trend can be achieved through growth and increased efficiency. OSS is a simple and useful measurement for MFI managers. Moreover, the indicator gains its significance in case the MFI is relatively young. In addition, while the MFI has low self-sufficiency, it must either increase its Return on Assets (RoA) or decrease its expenses (Ledgerwood 1998).

4. EMPIRICAL ANALYSIS OF THE MICROFINANCE SECTOR OF THE REPUBLIC OF MOLDOVA

4.1. Research objectives

An important part of research process is hypothesis formulation which is simply the investigator's belief about a problem. The literature review is especially important as it obviates the need to reinvent the wheel for every new research question. More importantly, it gives researchers the opportunity to build on each other's work.

The author did not try to invent wheel either and formulated thesis hypothesis from literature review. The objective of this study is to conduct an empirical analysis of the microfinance sector of the Republic of Moldova and provide a closer look at three major MFI's.

Specific objectives of the thesis are to determine the level of development of the microfinance sector and calculate main industry indicators; for three selected MFI's calculate outreach, efficiency and profitability indicators; analyze SCA network and determine its role in poverty alleviation.

The author believes that good finances have significant influence on the outreach of MFIs. Moreover, author tries to identify what challenges the micro financial institutions face in order to operate efficiently. Finally, a set of recommendations is formulated aimed at a more efficient operation of the microfinance industry as a whole.

4.2. Research methodology

Research methodology applied in present master thesis study combine qualitative methods (meanings, concepts, definitions) with quantitative examination according to the following data sources: (1) Mixmarket.org (2) Annual Reports of National Commission of Financial Markets of the Republic of Moldova (3) National Bureau of Statistics of the Republic of Moldova. (4) Annual and financial reports of the

"Microinvest" institution. (5) Annual and financial reports of the "ProCredit" institution (6) Annual and financial reports of the "Rural Finance Corporation" (7) World Bank resources and country reports, etc.

For the proper assessment of the current status of microfinance sector the following techniques have been used: description, summaries of local and overseas experience, comparisons, and experts assessments.

4.3. The outlook of the Republic of Moldova and the microfinance industry

4.3.1. Country profile

The Republic of Moldova is a country with a transition economy with agricultural sector accounting in 2010 for about 27 % of GDP[8]. In 2009 agricultural production and food processing industry provided about 30 percent of export revenues and employment to about 27 percent of the economically active population[9].

The country is highly dependent on remittances. According to the World Bank's Migration and Remittances Fact book (2011), 23 percent of GDP in 2009 came from money sent home by emigrants. Such a big share GDP coming from outside, together with high share of agricultural sector in the GDP and high occupancy rate in agriculture confirm how vulnerable Moldovan national economy is.

4.3.2. Microfinance sector establishment

In the Republic of Moldova, the microfinance sector is a relatively new occurrence. After the collapse of the Soviet Union in the early 90'ies Moldova gained independence and transition to the market economy commenced.

The initial development of microfinance sector was fragmented and sporadic. There was no clear strategy of microfinance sector development and the legal framework did not exist until 2004 when the law on Microfinance organizations was adopted by the

[8] Authors calculations based on the data of the National Bureau of Statistics of the Republic of Moldova.
[9] Authors calculations based on the data of the National Bureau of Statistics of the Republic of Moldova.

Parliament of Moldova. The law was preceded by, and largely based on the discussion paper on the strategy on the Microfinance Development for the Republic of Moldova[10].

In 1997 the first savings and credit organizations were established within Rural Finance Project financed by the World Bank. It is worth to mention that since 1997 up until now, the Government of the Republic of Moldova has been financially assisting the microfinance sector, acting as a guarantor for credits extended by World Bank and IDA funding small business development in rural areas[11].

Further, the law on Savings and Credit Associations was adopted on 21.06.2007. The following bylaws and regulations have been adopted aiming to normalize and regulate SCAs activity:

- norms of financial awareness;
- regulation on the state registration;
- regulation on transformation;
- Financial reporting principles.

Finally, Strategy Action Plan for non-banking financial market development for the period 2011-2014[12] coordinates development of the microfinance sector at strategic level.

Thus, the conclusion is that the main legal framework for the non-banking microfinance sector in the Republic of Moldova is in place, even though that further improvement and harmonization may be required.

4.4. Moldova microfinance industry size calculations

As of year-end 2011, the workers remittances to Moldova amounted 1316 mil USD, which were spent mainly on consumption, real estate and a new business establishment[13]. It is notable that this money for the purposes of efficiency could have been flowed through a microfinance system to work on the side of small businesses which in turn will increase the GDP growth, poverty reduction and consolidation of the middle income population as it is

[10] Microfinance Development Strategy for the Republic of Moldova, discussion paper, USAID project BIZPRO/MOLDOVA

[11] BizPro Moldova (2011): "Moldovan Savings and Credit associations' experience" with collaboration of WOCCU and USAID.

[12] Law no. 35 from 03.03.2011, Monitorul Oficial Nr. 70-73 (29.04.2011)

[13] The World Bank (2011) Migration and Remittances Factbook, 2nd edition

known that a healthy economy has a well-defined middle layer.

The annual demand for microloans/microcredits for small business has been estimated at USD 460. It covers about 46 thousand customers[14], each requiring on average USD 10 thousand annually. The actual current supply of microloans /microcredits has reached now only USD 116.1[15].

Accordingly, the current microfinance demand coverage expressed as a ratio of supply to demand (116.1/460*100) is only - 25%.

4.5. Microfinance clientele

Recipients of microfinance services are individuals not engaged in business activities, households and individuals (farmers, patent holders, self-employed), as well as legally registered entities (different associations and cooperatives, limited liability companies and joint stock companies) engaged in small businesses.

"One of the biggest challenges in relation to clients in microfinance sector is that 5 out of 6 potential clients lack access to microcredits and microloans".[16]

Most private individuals which borrow micro-loans from *commercial banks* come from urban areas and use money mostly for consumption purposes. Small and micro-enterprises serviced by commercial banks are engaged mostly in trading business, services and to a lesser extent in agriculture. Normally, the banks customers are companies with a long track record and a credit history.

In contrast, a new enterprise would rarely become a bank customer, since most of them would not be able to meet the eligibility criteria sought by banks in terms of the required set of loan application documents and the collateral.

In most cases, such enterprises are small, family businesses which look for long-term

[14] Author's estimates are based on the number of micro- and small enterprises in 2010, obtained from the National Bureau of Statistics of Moldova.

[15] The supply is calculated as the total microloan portfolio as of 2010 official data provided by National Commission on Financial Markets equal to 1435,7 mln MDL. Official average exchange rate during 2010: 1 USD = 12.3663 MDL

[16] Microfinance Development Strategy for the Republic of Moldova, discussion paper, USAID project BIZPRO/MOLDOVA

funding to purchase production assets. Such companies do not have credit history, hold small and highly depreciated assets and are characterized by lack of proper management skills. An average age of their business is about 3 years.

In addition, such clients need a pragmatic advice in financial, operational and strategic management issues. Thus, small family type businesses located in rural areas represent main target group of the non-banking microfinance institutions.

Finally, target group for SCAs is different since the loan size it can provide is too small. Besides, SCAs can provide services to its members only.

In conformity with the "Survey of SCAs network" (Agrex, 2002) the average age of SCAs' member is 41.5 years old[17]. Out of total number of SCAs members, 33 percent graduated the secondary school, 44 percent - attended vocational schools and 22 percent – are university graduates. Although the educational profile of the SCA members is high, most of them are unemployed, lack business planning and management skills and not always able to pick the most suitable financing instrument.

Findings of the same survey suggest that the average annual income of a household – member of SCA, is MDL 10.5 thousand. Within the range of business activities the SCAs members are engage in, agriculture accounts about 73 %.[18]

Although these three target customer groups of microfinance sector are quite different, there is no clear distinction between them. Often SCA and microfinance institutions clients become banks clients.

4.6. The analysis of the microfinance sector[19]

In 2010 microfinance sector of the Republic of Moldova experienced a moderate increase of all main performance indicators. During 2010, out of economically active population of the country, 5.1 percent benefited from the micro loans, which is 12.1 percent smaller than in 2009.

[17] The Survey of SCA network, AGREX, 2002
[18] National Bureau of Statistics of the Republic of Moldova
[19] The data in this section are largely based on the activity reports prepared by the National Commission of Financial Markets.

Table 1: Qualitative microfinance activity indicators in Moldova and Central and Eastern Europe

Indicator	Republic of Moldova						2010 compared to2009 (%)
	2009			2010			
No. of active population (persons)[10]	1,265,300			1,235,400			97,6
Sector	SCA	MFI	Total	SCA	MFI	Total	X
No of loan recipients (persons)	50,013	23,448	**73461**	37,824	25,145	**62,969**	85,7
Penetration rate (%)	3,95	1,85	**5,80**	3,06	2,04	**5,10**	87,9
Return on assets (%)	-3.08	3,98	**2,86**	-4,73	4,78	**3,45**	120,6
Return on equity (%)	-12,98	15,70	**11,37**	-18,16	12,94	**9,75**	85,8

Source: National Commission of Financial Markets

In 2010 the microfinance sectors rate of return on assets shows value of 3.45 percent which is 20.6 percent higher than in 2009. Rate of return on assets of MFI's has a positive value of 4.78 percent while the SCA's same parameter has a negative value of -4.73 percent.

Table 2: Development of microfinance activity

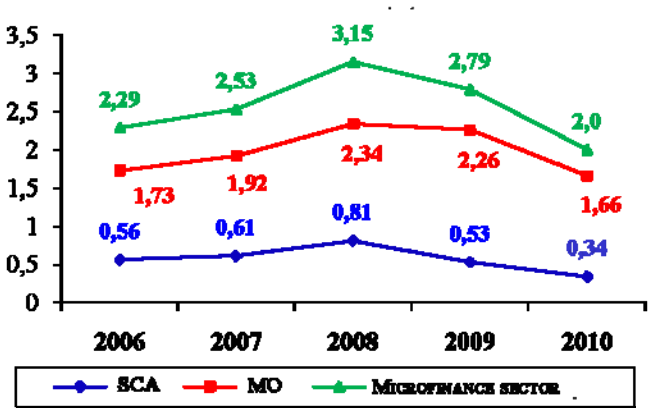
Indicator	2009			2010			2010 compared to 2009 (%)
	SCA	MFI	TOTAL	SCA	MFI	TOTAL	
Loans granted	322,9	1360,9	1683.8	244,2	1191,5	1435,7	85,3
Total assets	366,2	1933,8	2300,0	289,3	1783,9	2073,2	90,1
Net profit	-11,3	77,1	65,8	-13,7	85,2	71,5	108,7

Source: National Commission of Financial Markets

Decrease of main microfinance sector parameters is caused by the global economic crisis and a particular economic decay in Moldova, which on one hand reduced number of credits and investments received from outside the country (14, 7 percent), and on the other hand decreased return rate on the credits allocated to clients because of decreased remittances and other sources of income due to increased unemployment.

Increased indebtedness and, consequently, an increase of provisions to cover losses of loans determined moderate values of profitability rates, which, therefore, had directed priority of industry actors on the quality of the loan portfolio.

Figure 2: Share of microfinance loan portfolio in GDP



Source: National Commission of Financial Markets (reformatted by the author)

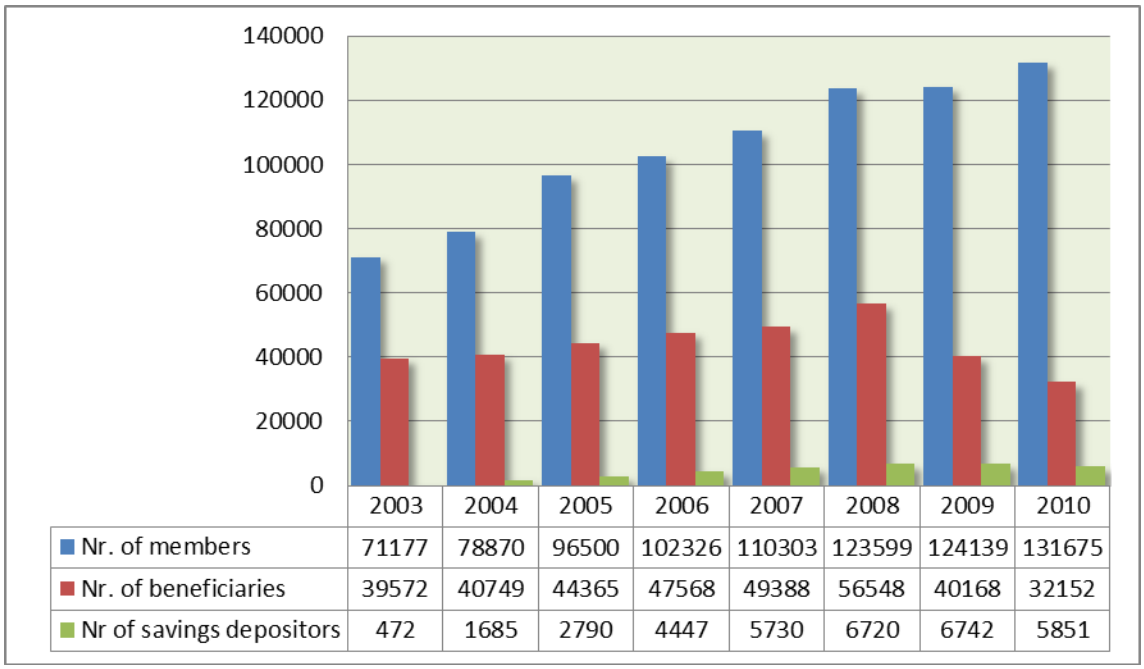
The total loan portfolio of the microfinance sector for 2010 formed nearly 2 percent of GDP out of which SCA's sector: 0.34 %, and the MFI sector: 1.66 %. The indicator decreased by 0.79 percentage points compared to 2009, which is explained by MFI's activity indicators decline and implementation of more thorough and prudent risk standards.

4.6.1. Activity analysis of SCAs.

The savings and credit organizations system in Moldova is following the trend of reorganization into institutions which provide financial services in a more structured and comprehensive way, targeted towards the clients benefit motivating people to save, establishing the education base on how to manage effectively own financial resources. Savings and credit associations are regulated by the Law No.139-XVI from June 21, 2007.

It is worth to mention that the amount of SCA members and loan beneficiaries were increasing until year 2008 followed by a decline after 2009 (see figure 4). Such a trend can be explained by a worsening world economic stability and the peak of financial crisis in 2009.

Figure 3: Development of the main SCA's parameters



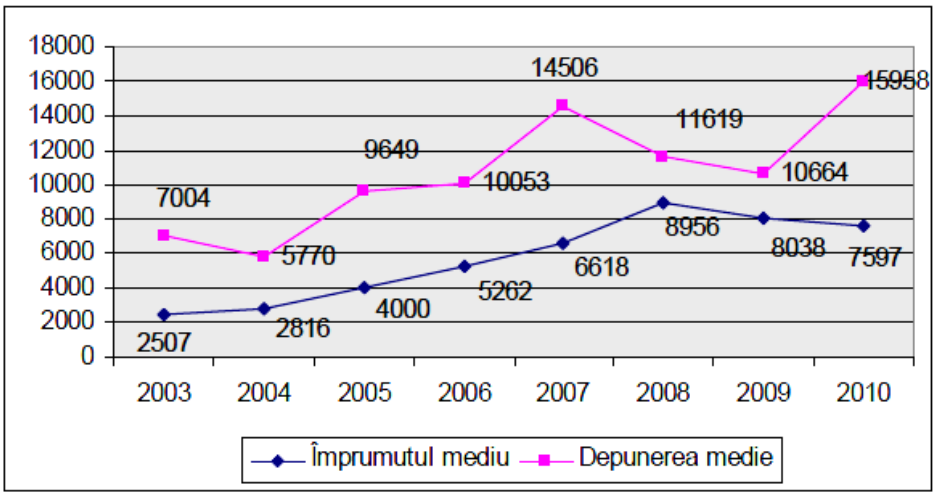
	2003	2004	2005	2006	2007	2008	2009	2010
Nr. of members	71177	78870	96500	102326	110303	123599	124139	131675
Nr. of beneficiaries	39572	40749	44365	47568	49388	56548	40168	32152
Nr of savings depositors	472	1685	2790	4447	5730	6720	6742	5851

Source: National Commission of Financial Markets (reformatted by the author)

In the period 2003-2008 average size of the loan allocated to a member continuously grew which implies also growth of the demand for SCA's loans.

In 2010 average size of loan was 7 597.0 lei, following descending trend line which started in 2008 and continued throughout 2009. Average size of savings deposit per member in 2010 reached its maximum ever of 15 958.0 lei (see figure 5).

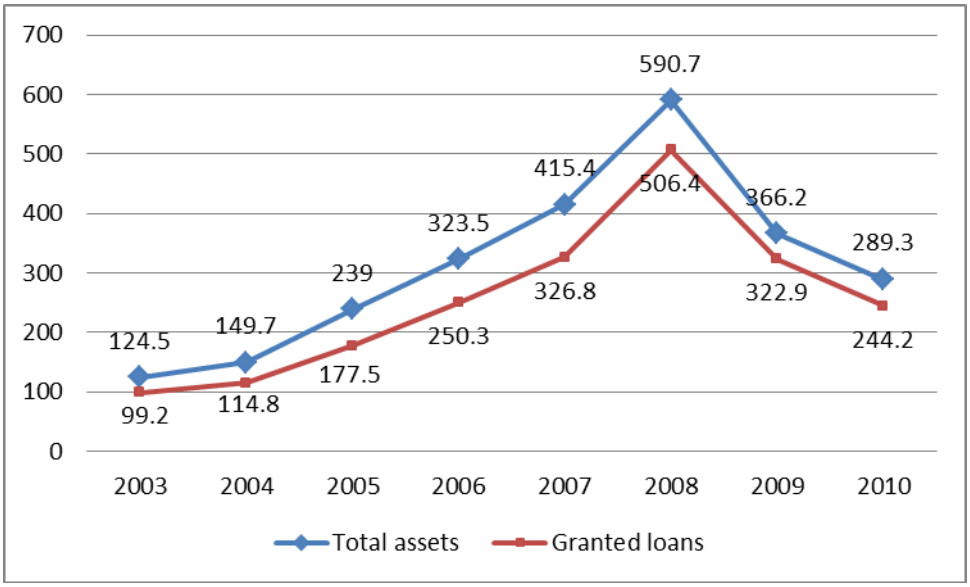
Figure 4: Average deposit and loan size



Source: National Commission of Financial Markets

For the period of 2003-2008 it is notable that the assets along with loan portfolio disbursed to SCA members were characterized by an increase of 38.3 percent and a decrease by 24.4 percent, compared to 2010. In such a way the total assets of savings and credit organizations were equal to 289.3 M Lei and loans disbursed equal to 244.2M Lei in 2010 (see figure 6).

Figure 5: Report of the total SCA's assets and loans granted



Source: National Commission of Financial Markets

The development of the SCA system is mainly characterized by the following indicators:

Table 3: General indicators of SCA's activity

Indicators	2009	2010	2010 compared to 2009 (%)
Number of members of association (persons)	124 139	131 675	106.1
Number of loans recipients (persons)	40 168	32152	80.1
Number of savings depositors (persons)	6 742	5851	86.8
Equity (mln. MDL)	87.6	75.3	86.0
Granted loans (mln MDL)	322.9	244.2	75.6
Savings Deposits (mln MDL)	71.9	93.4	129.9
Bank credits and received loans (mln MDL)	178.5	94.9	53.2

Source: National Commission of Financial Markets

The information on the SCAs operating on the territory of Republic of Moldova for the year end 2010 is presented in **Appendix B**.

4.6.1.1. Assets of the Savings and credit associations

At the end of 2010 consolidated value of SCAs assets was 289.3M MDL, which is 21 percent less than in 2009. The decline is caused by the decreased value of loans disbursed by banks by 46.8 percent.

SCAs assets are mainly comprised by granted loans total value which is on average 84.4 percent, if compared to 2009 it is 3.8 percent less.

The structure of SCAs assets for two periods respectively 2009 and 2010 is shown in Table 4 below.

Table 4: Comparative structure of SCAs assets (mil. lei)

Assets	2009	2010	Change in 2010 compared to 2009
Securities	4.6	4.1	-0.5
Bank deposits	32.1	29.2	18.1
Provided loans	322.9	244.2	-78.7
Loans provisions	-31.8	-28.2	-3.6
Long term material and non-material assets	5.4	5.2	-0.2
Cash funds	11.3	12.6	+1.3
Currents accounts	3.3	5.9	+2.6
Interest-related receivables	20.4	19.5	-0.9
Interest provisions	-4.4	-5.6	+1.2
Other assets	2.4	2.4	-
TOTAL	**366.2**	**289.3**	**-76.9**

Source: National Commission of Financial Markets

It is notable that the priority given to profit-generating assets instead of fixed and non-profitable assets. However, the share of priority given assets decreased in 2010 as compared to less efficient ones, which is lower than the minimum level recommended by WOCCU by 2.4 percentage points.

Financial structure of SCAs assets classified according to WOCCU classification is presented below in table 5.

Table 5: Analysis of the financial structure of SCA's

Indicators	Share in overall assets (percent)		Recommended level/range (share in overall assets, percent)
	2009	2010	
Efficient assets:	**93.5**	**92.6**	**Minimum 95**
1) Provided loans (diminished by the value of loan loss provisions)	79.5	74.7	**70-80**
2) Liquid assets	14.0	17.9	**Maximum 16**
Inefficient assets:	**6.5**	**7.4**	**Maximum 5**
1) Long term material and non-material assets	1.5	1.8	
2) Interest-related recievables (diminished by the value of interest provisions)	4.4	4.8	
3) Other assets	0.6	0.8	

Source: National Commission of Financial Markets

In such a way we can see an unfavorable change in the structure of SCAs assets which is mainly followed by:

- decrease in number of provided loans, and;
- Increase in liquid assets which caused a lower income generated.

4.6.1.2. Ownership equity

The consolidated shareholder equity as of YE2010 equated to 75.3M MDL, showing a decrease by 12.3M MDL which is 14 percent less compared to 2009.

Consolidated losses were 13.7M MDL for year 2009, which is 21.2 percent less than the increased losses in 2010. Such trend can be characterized by a 38.9 percent decrease of interest receivables from loans provided and declined income from deposits at commercial banks by 51.5 percent.

Minimal value of reserves an institution requires to maintain recommended by WOCCU is 10 percent. The reserves of Moldovan SCA's were 24.6 percent at YE2010. Maximal value of member shares-to-assets recommended by WOCCU is 4.6 percent, while Moldovan SCAs maintained this ratio at 4.6 percent. In such a way, we can note that SCAs operate in compliance with requirements on capital sufficiency, which ensures the efficient risk management.

4.6.1.3. Savings Deposits

Consolidated value of the deposits which SCAs members were maintaining is shown in Table 6 below.

Table 6: Structure of savings deposits by due date (mil. MDL)

Due date	2009 (mil. Lei)	2010 (mil. Lei)	2010 as compared to 2009 (percent)	Share (percent)	
				2009	2010
Less than 1 months	2.6	2.9	111.5	3.6	3.1
1-3 months	5.0	6.6	132.0	7.0	7.1
3 months – 1 year	57.0	72.6	127.4	79.3	77.7
1-3 years	7.3	11.3	154.8	10.1	12.1
3-5 years	0.0	0.0	-	0.0	0.0
Over 5 years	0.0	0.0	-	0.0	0.0
TOTAL	**71.9**	**93.4**	**129.9**	**100.0**	**100.0**

Source: National Commission of Financial Markets.

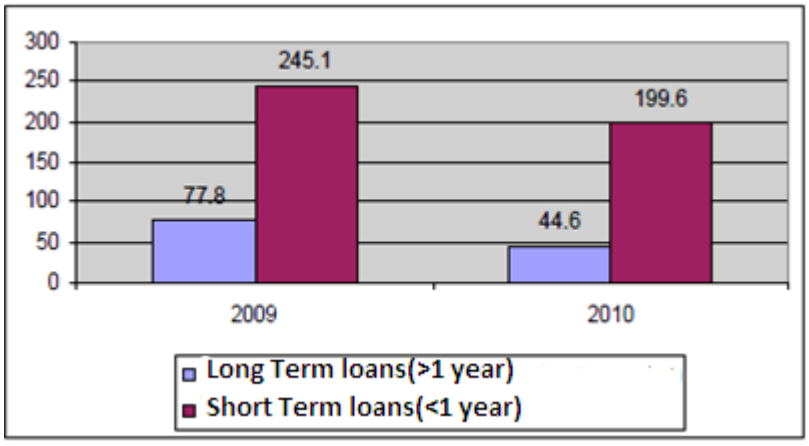
SCAs tend to accept savings deposits for a short term of up to 1 year, the share of savings deposits with due date 3 months to 1 year is 77.7 percent.

The share of savings deposits in total value of assets for YE2010 is 55.4 percent, which is 19.9 percent higher compared to 2009. The increase shows a lower dependence on external financing sources. The ratio of deposits-to-total assets is below the parameters recommended by WOCCU (70-80 percent); however the ratio of 55.4 percent clearly show that SCAs will likely reach a sufficient level of self-sufficiency.

4.6.1.4. Portfolio of granted loans

The total value of short and long term loans provided to SCA members is shown on figure 7 below.

Figure 6: Structure of loans granted by SCA's, M MDL

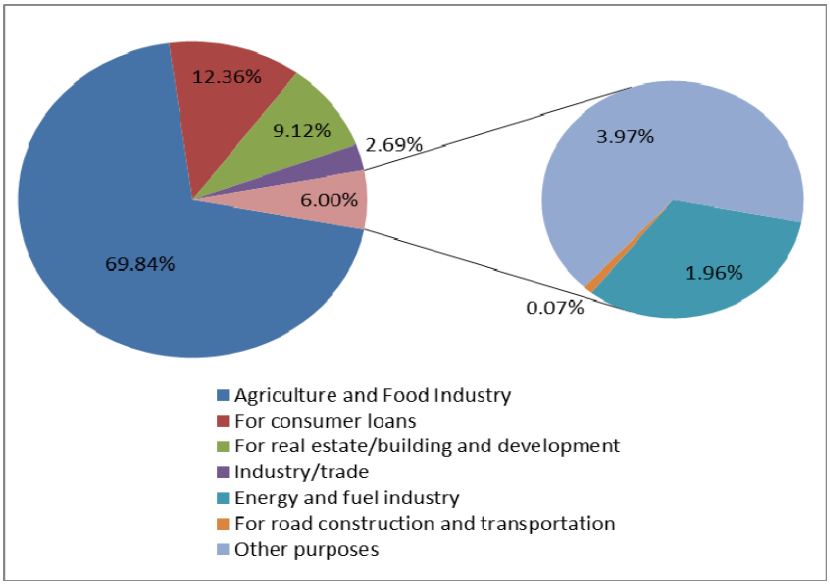


Source: National Commission of Financial Markets

Short term loans disbursed for less than one year comprise 81.7 percent of the gross volume of provided loans, which is by 4.2 percent more than in 2009. The decline is explained by a decrease in loans provided overall and a significant amount of long-term loans which were due in 2010.

The structure of loan portfolio by industry sectors as of YE2010 is shown on Figure 8 below. It is notable that loans for agriculture and Food industry have the biggest share of 69.84 percent, which clearly shows that the main industry in Moldova is agriculture.

Figure 7: Structure of SCA's loan portfolio by direction of use



Source: National Commission of Financial Markets (author reformatted)

4.6.1.5. Financial results

SCAs recorded a net loss of 13.7M MDL during year 2010 which is 21 percent more versus 2009. The interest income decreased by 51.2M MDL or by 40 percent, while expenses on savings deposits declined by 1.4M MDL or by 11 percent.

Financial results of SCAs are shown in the following table 7.

Table 7: Financial results of SCAs

Indicators	2009 mil. MDL	2010 mil. MDL	2010 as compared to 2009
Incomes from interest related to granted loans	131.1	80	61
Other interest incomes	6.6	3.2	48.5
Net result from the creation and cancellation of provisions	-38.3	-39.5	97
Other operational incomes	19.8	25.1	126.8
Investment activity result (profit)	1	1	-
Financial activity result (profit)	0	0	-
Exceptional result: profit (loss)	-0.1	-0.1	-
Expenditures (savings) on the income tax	0	0	-
Total income	**120.1**	**69.7**	**58**
Savings deposits interest expenses	13.2	14.6	110.6
Other interest expenses	74.4	29	39
General and administrative expenses	38.3	36.5	95.3
Other operational expenses	5.5	3.3	60
Total expenditures	**131.4**	**83.4**	**63.5**
NET PROFIT	**-11.3**	**-13.7**	**82.5**

Source: National Commission of Financial Markets (author reformatted)

According to WOCCU the share of general and administrative expenses to total assets has to me maintained at ratio of 5. Moldovan SCAs ratio is 12.6 percent in 2010 versus 2.1 percent in 2009 which exceeds the level recommended.

4.6.1.6. Evaluation of savings and loan system via the PEARLS model.

In 1990 WOCCU proposed the PEARLS model which is aimed to monitor and analyze credit unions. The model itself is a set of financial ratios which assists the management of credit unions to effectively manage the union based on current industrial trend. PEARL is based on the rations such as risk protection for delinquent loans, current financial structure, assets quality, liquidity and the growth rates of these.

The following table 8 represents a summary of PEARL indicators.

Table 8: PEARLS analysis

PEARLS indicators	2009 (%)	2010		Recommended level/range (percent)
		SCA license A holders	SCA license B holders	
Total charge-off of loans covered / total charge-off of loan registered	12.0	16.4	38.9	>75
Net loans / Total assets	79.5	73.7	75.4	70-80
Liquid assets / Total assets	14.0	17.8	18.0	<=16
Securities / Total assets	1.3	1.7	1.2	<=2
Savings deposits / Total assets	19.6	-	32.3	70-80
Bank credits and received loans / Total assets	48.7	-	18.1	0-5
Member shares / Total assets	3.5	-	4.4	<=20
Institutional capital* / Total assets	20.4	26.6	17.7	>=10
Delinquent loans / Total loan portfolio	21.2	20.1	16.2	<=5
Non-earnings assets** / Total assets	5.2	6.9	7.1	<=5
Liquidity reserve*** / Savings deposits	14.0	-	12.3	>=10
Cash / Total assets	3.1	4.7	4.1	<1

Source: National Comission of Financial Markets

The ratio of loans-to-assets is within recommended level which show that SCAs are maintaining the loan-asset portfolio effectively,

The ratio of liquid-to-total assets in 2010 exceeds the recommended level of 16 percent. Such a trend has a negative effect over SCA principle and is due to increased share of non-interest generating assets.

Moldovan SCAs are maintaining the sufficient level of securities-to-total assets and capital-to-assets and in fact are maintaining quite well the risks associated with the operational activity and accumulating reserves to cover possible investment and/or financial losses.

It is notable that Moldovan population is not keeping most of their savings in SCAs; such a trend is followed from savings-to-assets ratio which is way below the recommended level.

The share of delinquent loans significantly exceeds the recommended 5 percent level which is due to the high share of non-secured loans in total loan portfolio and SCAs are facing an increased loan reimbursement issues.

4.6.2. Analysis of MFI's activity

As of YE2010 there were 43 MFIs, of which 37 submitted financial reports. The summary of the results is presented in the below table 9.

Table 9: General Indicator of MFI activity

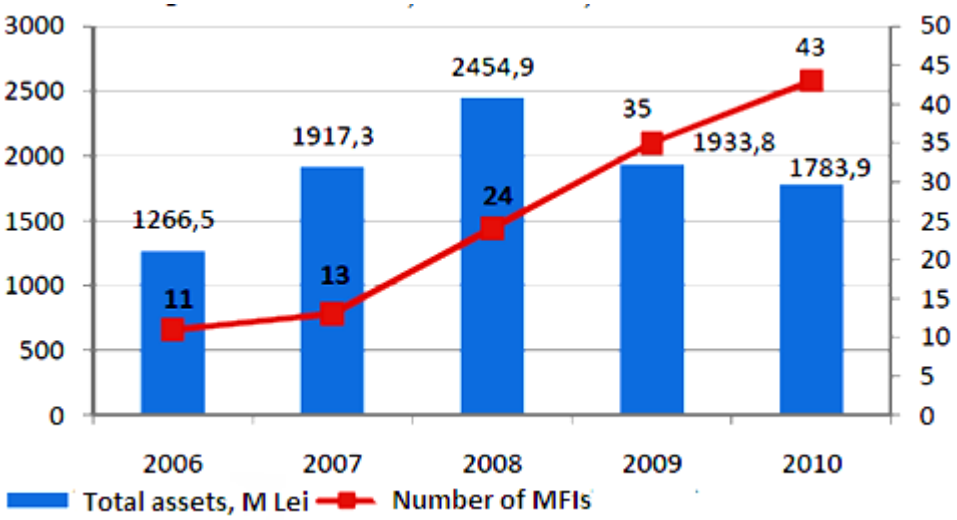
No	Indicator	2009	2010	2009 compared to 2010 (%)
1	Number of microfinance organizations (units)	35	43	122.9
2	Own capital (mln MDL)	491.1	658.4	134.1
3	Total assets (mln MDL)	1933.8	1783.9	92.3
4	Provided loans (mln MDL)	1360.9	1191.5	87.6
5	Bank credits and received loans (mln MDL)	1380.1	998.7	72.4
6	Net profit (mln MDL)	77.1	85.2	110.5
7	Assets profitability rate (%)	4.0	4.8	120.0

Source: National Commission of Financial Markets

The indicators show a decreasing trend as MFI were reducing its credit facilities with banks, which in turn reduced the portfolio of provided loans by 12.4 percent.

The number of microfinance organizations in Moldova increased four times since 2006. However, it is notable that after 2008 the assets started to decrease, while the number of MFI's continued to increase (see Figure 9). It is explained by a decreased number of disbursed loans and an increased completion on the peak of financial crisis.

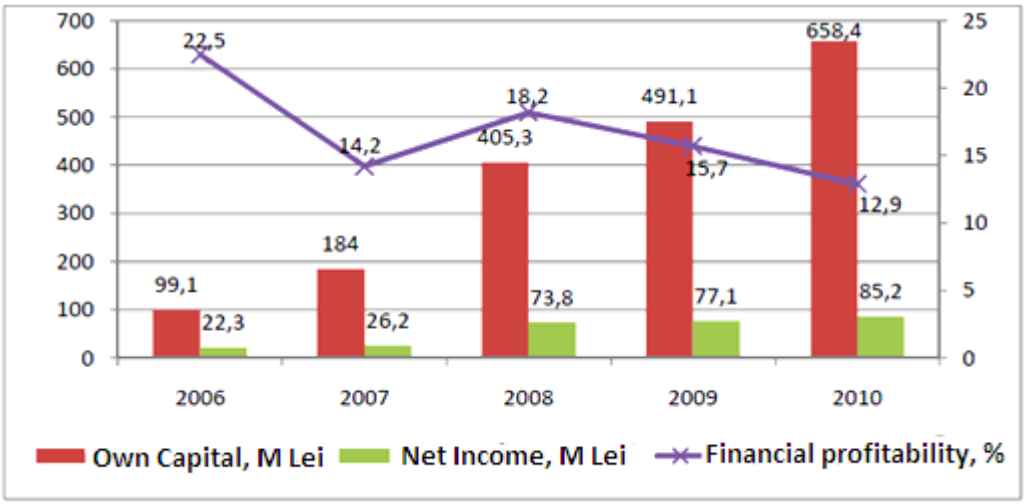
Figure 8: Relation between total MFI assets and no. of MFI's



Source: National Commission of Financial Markets

The value of Own capital held by MFIs had reached 658.4 M Lei in 2010 which was constantly growing since 2006, showing an increase of 6.6 times (see figure 10).

Figure 9: Evolution of own capital, net profit and financial profitability



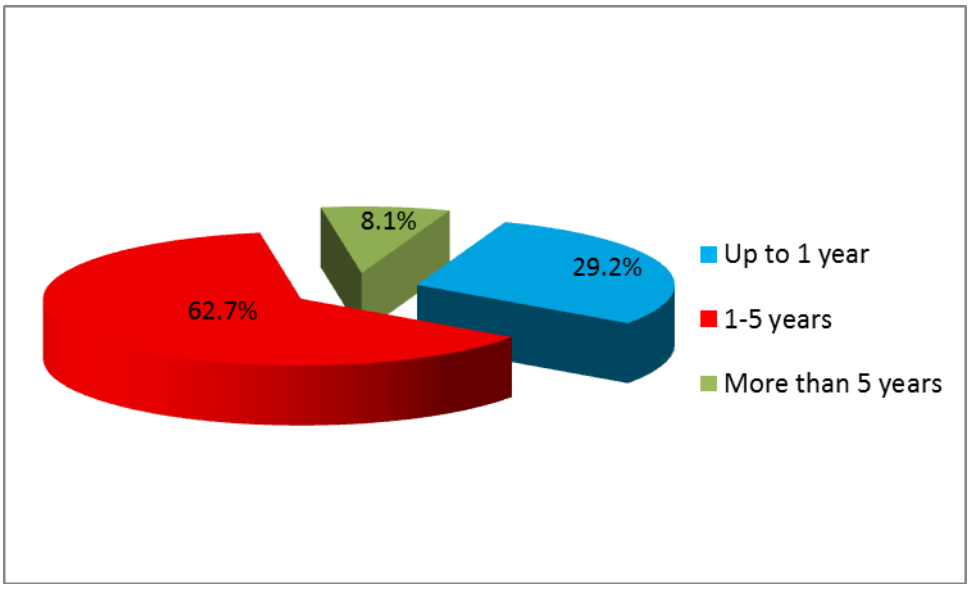
Source: National Commission of Financial Markets

The rate of financial profitability which is the interest income from the loans disbursed during last 6 years had a decreasing trend with the smallest value being recorded in 2010, around 13 percent. Slowdown of economic development of MFIs, characterized through diminished loans portfolio compared to increased number of registered MFIs had determined reduction of financial returns. Though there were new MFIs registered,

due to the fact that these new organizations were in their first years of their activity they did not have a feasible influence on microfinance sector in Republic of Moldova.

The loan portfolio spread by length as of year-end 2010 can be seen in the following figure 11.

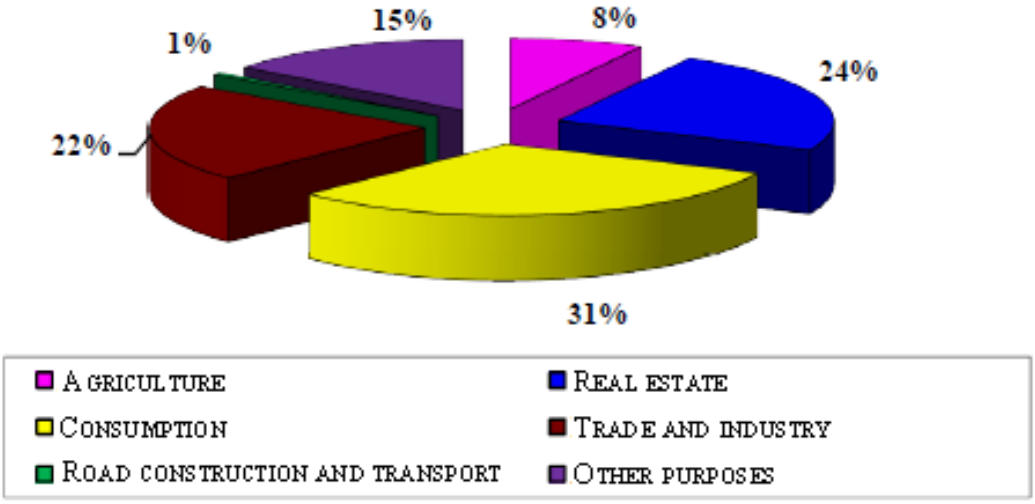
Figure 10: Loan portfolio according to loan length



Source: National Commission of Financial Markets (reformatted by the author)

Loans with duration of one to five years comprise 62.7 percent of loans provided by MFI's out of which only 68 to 70 percent are secured. On the second place with 29.2 percent are the loans with duration of up to one year, which are the riskiest being collateralized only on 66 percent. In turn long term loans with duration of more than five years comprise 8.1 percent, out of which 95-97 percent are secured by a mortgage. The segmentation of loans disbursed by sectors of national economy is shown on figure 12 below.

Figure 11: Structure of MFI's loan portfolio by direction of use



Source: National Commission of Financial Markets (reformatted by the author)

We see a slightly different spread for loans provided by MFIs if compared to loans provided by SCAs. The main share of loans provided by MFIs is for consumption purposes while SCAs are aiming mainly towards agricultural sector of national economy. Another two significant directions of use are Trade and Industry and Real estate with 22 and 24 percent respectively.

Basic indicators on the activity of the MFI for year 2010 are shown in Appendix A.

4.7. Assessment of selected MFI's.

4.7.1. Background of the Rural Finance Corporation[20]

Rural Finance Corporation (RFC) is a non-banking financial institution which plays a role of central finance facility for SCAs. The corporation was initially formed through joint collaboration between the World Bank's Rural Finance Project and the Government of Moldova. The mission of RFC is to promote rural development by offering favorable financial services to farmers and entrepreneurs. The corporation also works alongside the Republic of Moldova in its efforts to alleviate poverty. Created in 1997 by the first few savings and loan associations of Moldova, RFC today consists of 283 shareholder associations. Although RFC is a joint stock company, it is a cooperative-style institution in which its clients are at the same time its owners. RFC lends money to its SCAs which in turn lend to their individual members.

All these years, the RFC provided directly or throughout SCAs to rural farmers and entrepreneurs more than 130,000 microcredits in the total amount exceeding 450 mil MDL (about than $39 mil USD).

In the current year the loan portfolio of the RFC exceeded 271M MDL. Registered with the initial capital of 22,500 MDL, in 7 years of operation the RFC became a country-wide financial institution with assets amounting more than 338.3 mil MDL and with a share capital of 5.3 mil MDL and owned by 809 SCAs as shareholders, as well as a number of natural persons.

Thus, even if registered as a Joint Stock Company, the RFC is a true cooperative organization, as its shareholders are at the same time its clients. At present the RFC works with approximately 175 SCAs, as well as with more than 634 rural farmers and entrepreneurs. The Corporation collaborates with international partners and uses the funds of such international financial institutions as World Bank, International Fund for Agricultural Development (IFAD), United States Agency for International Development (USAID), Swedish International Development Agency (SIDA), and Department for

[20] The information under this sub-chapter is a summary from the official annual report revised by the author: www.microfinance.md

International Development of the United Kingdom, Great Britain and Northern Ireland (DFID).

4.7.2. Background of the "ProCredit"[21]

ProCredit company has been established as a LLC in 1999 under the name "Micro Enterprise Credit (MEC) Moldova". Its ownership structure and corporate philosophy are unique in the Moldovan financial sector. Beginning with July 2004 the company is known as ProCredit, following a decision of its shareholders to adopt a single name and logo for their 18 microfinance banks and companies worldwide. As from launching its operations in Moldova in 1999, the ProCredit has granted 9,000 loans in the total amount of 27M USD.

The institution founders and current shareholders are also the initiators of international programs for promoting the small business sector in developing countries and transition economies. They are Internationale Micro Investitionen AG (IMI), the European Bank for Reconstruction and Development (EBRD), the International Finance Corporation (IFC), the Stichting DOEN Foundation and the Western NIS Enterprise Fund. The shareholding is distributed as follows: IMI – 38%, EBRD – 15.3 %, IFC – 15.3 %, DOEN – 15.3 %, WNISEF – 15.3 %.

4.7.3. Background of the "Microinvest"[22]

The Microinvest Ltd has been founded in April 2003 by a single founder – the Soros Foundation Moldova, with the technical and financial support of a wide number of international donor organizations: Open Society Institute, PFAP, IFAD, GTZ, Women World Banking, CGAP, NOVIB.

Microinvest has launched itself in providing 3 types of micro credit services to rural entrepreneurs with no credit history: provision of loans (up to 140,000 MDL per borrower), guarantees (up to 140,000 MDL per borrower) and equity capital investments (up to 500,000 MDL per borrower). Since the very foundation, the Microinvest has invested in the above activities approximately 11.3 mil MDL.

[21] Mix Market - MFI profiles (www. mixmarket.org)
[22] The information under this sub-chapter is a summary from the official annual report: www.microinvest.md

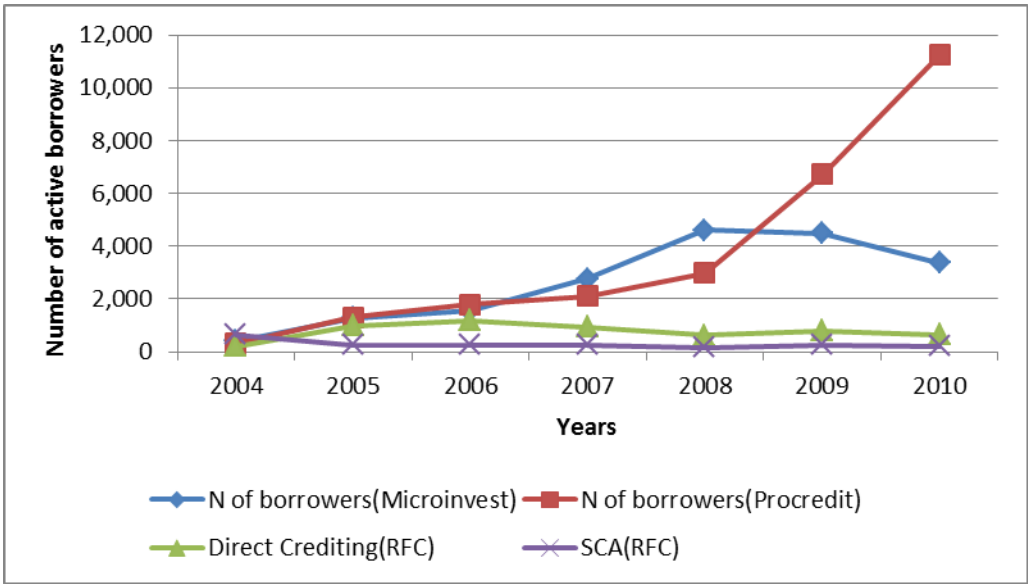
4.7.4. OUTREACH, FINANCIAL PERFORMANCE AND SUSTAINABILITY

This section represents the comparison of the three selected microfinance institutions based on quantitative data from mixmarket.org database along with the financial results taken from the web pages of respective institutions. The comparison in the outreach, financial performance and sustainability is performed.

Outreach

Evaluating the overall number of clients which received loans from an MFI is the main indicator which determines micro financial institutions outreach. Figure 13 illustrates the number of active borrowers being served by the three main microfinance institutions operating on the territory of Republic of Moldova. It is clear that as of year 2010, ProCredit has the biggest outreach in terms of direct crediting, however it must be emphasized that RFC is the only one institution which deals with savings and credit organizations (SCAs). Thus for the period 2004-2010 the RFC has the leading role in the industry outreach.

Figure 12: Number of active borrowers



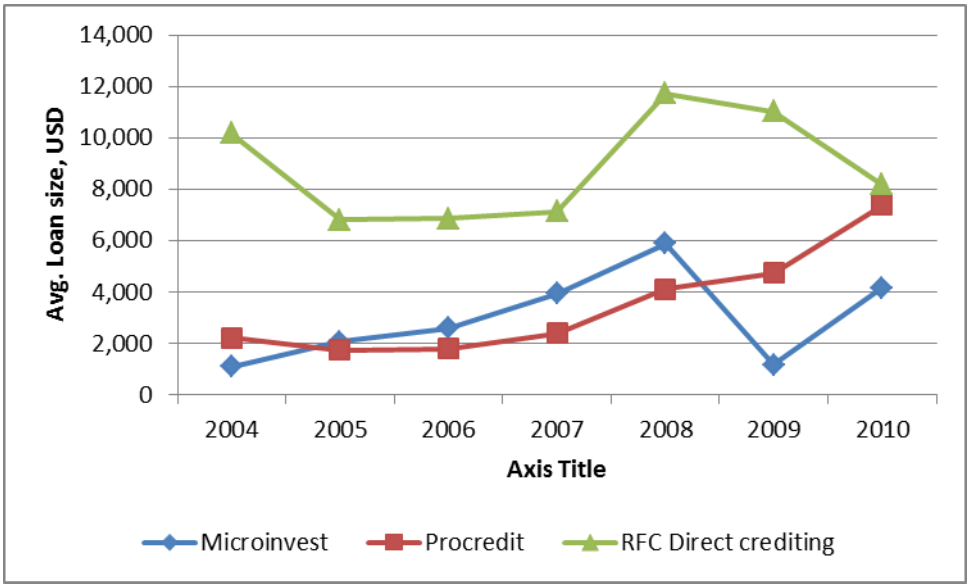
Source: Authors plot using annual reports of respective MFIs

It is notable that the growth rate in terms of industry outreach is not casual and volatile, which is a positive factor. The moderate growth allows for a reliable significance of

indicators which determine the profitability and efficiency of these microfinance institutions.

According to Robert Cull et al., 2007, loan size can explain the borrower's poverty in a way that the poorest clientele is aiming for a small and cheap loan. However, measuring the average loan size allows determining at which layer of society an MFI is targeted (poor, middle, rich). In such a way, our study argues that the MFIs we investigate are not pro poor, using the indicator of loan amount less than $150[23] as a benchmark to distinguish poor and middle population layers (see Figure 14).

Figure 13: Average loan size



Source: Authors plot using annual reports of respective MFIs

As a measure of financial sustainability we use the operational sustainability examination, as component of financial sustainability measurement. The operational sustainability of all three institutions is above 100 percent line in most cases over the period of 2004-2010. It must be noted that for the period of 2006-2009 there is a decline through 100 percent level, the ProCredit institution even falls below the line in 2008, such behavior is due to increased operating expenses and provision for loan losses. The RFC's operational sustainability is much higher due to lower operating expenses and stable operating income. In addition, the period of 2009-2010 has the positive pattern and the operational sustainability of all three institutions is converging.

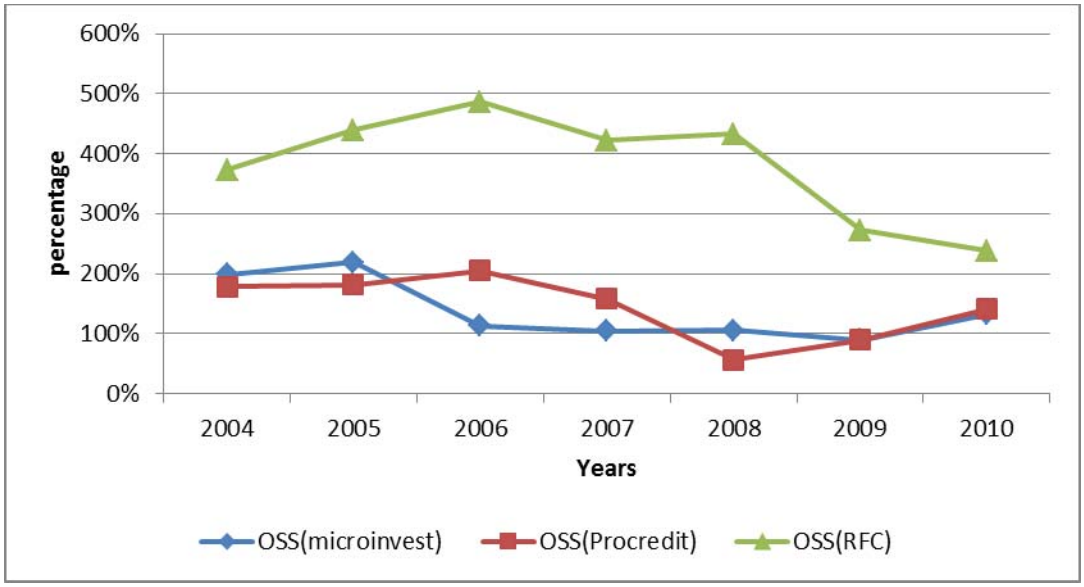
[23] Microfinance manual of United Nations Capital Development Fund (UNCDF).

Financial sustainability

According to MFIs annual reports, Microinvest and ProCredit have some subsidies on their balance sheets during 2006-2008 and RFC mostly uses its own resources. Subsidies create an uncertain bias for financial sustainability assessment. In such a way the alternative indicators were used for assessment purposes in this study.

Operational sustainability as a component of financial sustainability is presented in the below figure 15.

Figure 14: Operational self sufficiency



Source: Authors plot using annual reports of respective MFIs

It is clear that Moldova's MFIs as industry are operational sustainable. Moreover, for year end 2010 RFCs sustainability is between 300-400 percent, while Microinvest and ProCredit tend to have equal operational sustainability in most cases with lower values. RFC has the highest OSS being the main creditor of SCAs. However, after 2008 RFC has a declining trend which is perfectly explained by a deteriorated economic environment in the Republic of Moldova.

4.8. Sources of data and description of data sets

To prove the hypothesis and see the theoretical projection on real world it is required to use the most recent available sources of data. All the MFI's presented in diploma thesis have their own web pages, where they publish annual reports and financial statements. Moreover, the data which was required to produce the financial analysis and were missing from the above sources was completed using the "internet database for financial and social performance data on MFIs across the globe"[24].

For the consistency of comparison basis, the latest data is taken as of December-2010 due to the fact that 2011 data is not publicly available for all three selected MFIs and Savings and Credit Organizations (SCAs).

4.9. Testing variables significance

In this section we determine the statistical significance of variables which could influence or express the Operational Efficiency of the portfolio along with portfolio Yield. We determine the specifics of the functioning of MFI namely if they do really focus on poor or middle income layer.

The following variables were used: operational efficiency, portfolio quality, age, operational self-sufficiency (OSS), profit margin (PM), average loan size, return on assets (ROA), return on equity (ROE) and portfolio at risk (PaR). For statistical summary of selected MFIs see **Appendix C**.

We use two econometric models which help us to determine the factors which influence the efficiency and profitability of MFIs.

In first model all RHS variables are taken as logarithms in order to normalize their distribution. In addition RHS variables are lagged by one year because the logic tells us that portfolio Yield is dependent from the results from previous years.

In order to compute the models we use the econometric software GRETL.

[24] www.mixmarket.org

Model N1:

$$(Yield)_t = \beta_0 + \beta_1(age)_{t-1} + \beta_2(OER)_{t-1} + \beta_3(OSS)_{t-1} + \beta_4(PM)_{t-1} + \beta_5(Cost\ of\ funds)_{t-1} + \beta_6 PAR_{t-1} + \beta_7(Loan\ size)_{t-1} + \varepsilon_t$$

Model N2:

$$(OER)_t = \beta_0 + \beta_1(age)_t + \beta_2(OSS)_t + \beta_3(PM)_t + \beta_4 PAR_t + \beta_5(Loan\ size)_t + \varepsilon_t$$

Model 1 *Yield* (portfolio yield) is a dependent variable; Independent variables are MFI age, operational efficiency, operational sustainability, profit margin, cost of funds, portfolio at risk and loan size. The independent variables are impaired by one year and are in the period *(t-1)*.

Model 2 *OER* is dependent variable. Independent variables are MFI age, operational sustainability, profit margin, portfolio at risk and loan size. All variables are for the period *t*.

The Output from the model 1 is as follows:

Table 10: Pooled OLS model, using 21 observations for the years 2004-2010

Dependent variable: Yield

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const	0.236283	0.213761	1.1054	0.28904	
Age	-0.0532836	0.0223929	-2.3795	0.03334	**
OER	-0.923551	0.581906	-1.5871	0.13650	
OSS	0.150669	0.0506957	2.9720	0.01080	**
PM	-0.240998	0.142019	-1.6969	0.11350	
Cost_of_Funds	1.16279	0.396128	2.9354	0.01159	**
PaR30	3.43071	1.16485	2.9452	0.01138	**
Loan_size	4.04125e-05	1.32833e-05	3.0423	0.00944	***

Mean dependent var	0.559845	S.D. dependent var	0.385074
Sum squared resid	0.190849	S.E. of regression	0.121164
R-squared	**0.935647**	Adjusted R-squared	0.900995
F(7, 13)	27.00133	P-value(F)	9.11e-07
Log-likelihood	19.56063	Akaike criterion	-23.12127
Schwarz criterion	-14.76509	Hannan-Quinn	-21.30776
Rho	-0.266799	Durbin-Watson	2.385273

Let us take a brief look at the model results. The model is explained on 93% (R-squared=0.93) which is a good result, it means that explanatory variables fully

explain the Yield of the portfolios. The variable "Age" has negative sign with 95% confidence, "OSS" variable is significant with 95% confidence and has positive influence on dependent variable, "Cost_of_Funds" variable has positive coefficient with 95% confidence, and the average "Loan_size" has positive sign with 99% confidence.

The output from the model N2 is as follows:

Table 11: Pooled OLS model, using 21 observations for the years 2004-2010

Dependent variable: OER

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const	0.259821	0.06272	4.1426	0.00087	***
OSS	0.030818	0.0174042	1.7707	0.09692	*
PM	-0.135141	0.0595504	-2.2694	0.03843	**
PaR30	0.41755	0.371905	1.1227	0.27920	
Age	-0.0210877	0.00655375	-3.2177	0.00575	***
Loan_size	8.45089e-06	8.54092e-06	0.9895	0.33813	

Mean dependent var	0.228003	S.D. dependent var	0.103578
Sum squared resid	0.095343	S.E. of regression	0.079726
R-squared	**0.555648**	Adjusted R-squared	0.407531
F(5, 15)	3.751405	P-value(F)	0.021067
Log-likelihood	26.84767	Akaike criterion	-41.69533
Schwarz criterion	-35.42820	Hannan-Quinn	-40.33521
Rho	0.071775	Durbin-Watson	1.296323

Let us take a brief look at the result of model 2. The model is explained on 55% (R-squared=0.55) which is not too weak result. The variable Age has negative sign with 99% confidence, PM variable is also negative and has 95% confidence, and OSS variable has positive influence on OER with 91% confidence.

However, before considering model results as reliable we need to run some simple tests to make sure that the specification is correct and compiled data set-up is an appropriate. To test the model for heteroskedasticity we use White Test, and check if the residuals are normally distributed.

Heteroskedasticity implicate the presence of correlation between explanatory variables and stochastic disturbance term. The presence of heteroskedasticity violates the basic OLS assumptions and therefore makes the estimation results not reliable.

According to (Baltagi, 2001) and many other authors, we can test the model for heteroskedasticity using White-Test and Breush-Pagan test.

Before running the White test let's briefly determine the hypotheses of the test.

H_0: $\beta_i=0$
H_A: $\beta_i\neq0$

In words, under the null hypothesis there is no correlation between explanatory variables and disturbance term, and under the alternative hypothesis the correlation is present between explanatory variables and disturbance term.

We do not have to calculate the test statistic manually as the "Gretl" software does it for us, and the result of the test estimation is presented in the tables below.

Table 12: White's test for heteroskedasticity for Model 1

White's test for heteroskedasticity : Null hypothesis: heteroskedasticity not present Test statistic: LM = 11.6802 with p-value = P(Chi-Square(14) > 11.6802) = 0.63197

Source: Author's plot

Table 13: White's test for heteroskedasticity for Model 2

White's test for heteroskedasticity: Null hypothesis: heteroskedasticity not present Test statistic: LM = 18.0803 with p-value = P(Chi-Square(10) > 18.0803) = 0.0536236

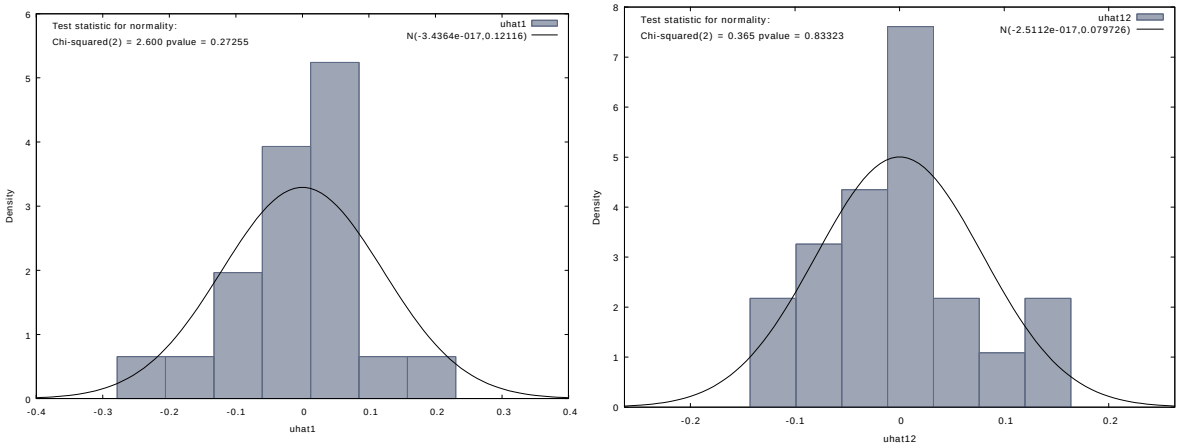
Source: Author's plot

Model 1: The p-value is 0.63, therefore we cannot reject the null hypothesis and conclude that heteroskedasticity is not present.

Model 2: The p-value is 0.053 (which is still above 5% confidence interval), therefore we cannot reject the null hypothesis and conclude that heteroskedasticity is not present.

In addition we check whether the residuals in both models are normally distributed. For this purpose first we use a graphical method (see Figure 16)

Figure 15: Test statistics for normality of residual (left: Model 1, right: Model 2)



Source: Author's plot

Model 1: The residuals are normally distributed.

Model 2: The residuals are normally distributed.

In addition we test the hypothesis of *normality of distribution of error terms*:

H_0: error is normally distributed
H_A: error is not normally distributed

Using the econometric software above we run the normality test on the resulted models, the output is presented in the boxes below:

Box 2: Test for normality of residual for Model 1

Null hypothesis: error is normally distributed
Test statistic: Chi-square(2) = 2.59989
with p-value = 0.272546

Source: Author's plot

Box 3: Test for normality of residual for Model 2

Null hypothesis: error is normally distributed
Test statistic: Chi-square(2) = 0.364899
with p-value = 0.833227

Source: Author's plot

Model 1: Using the p-value=0.27 we cannot reject the hypothesis that the error is normally distributed.

Model 2: We cannot reject the null hypothesis with p-value=0.83. Therefore we can conclude that the residuals are normally distributed.

4.9.1. Suggestions to MFIs using model specifications

The economic growth can be achieved by improving conditions of government subsidies for credit programs which in turn reduces overall poverty in the country. The government support substantially reduces interest rate charges, increases the stability of state-owned financial institutions, and creates a bias for debt forgiveness. However in some cases, government support may create an additional burden to taxpayers and loss of effectiveness and may lead to fiscal year losses if the funds are mostly allocated to investment and financing purposes and not to the operational activity of an MFI. A strategic proportion between funds allocation, clean accounting and reporting principles are crucial for an effective and constantly growing MFI.

We consider that the most effective way for an efficient MFI is to understand its cost structures, timely investments, and how to maintain operational efficiency on a rational and sustainable level.

Despite the fact that microfinance sector in Moldova has grown four times since 2006, the industry is still facing certain difficulties (transaction costs, law, collateral etc.). In order to be competitive MFIs shall optimize its costs, learn how to mitigate risks and offer bigger variety of financial services.

Model 1 suggests that an increase in operating costs, being numerator of Operational efficiency ratio, cause the portfolio yield to decrease. Portfolio yield declines by 0.92 percent for current period if there is a one percent increase in the operational efficiency ratio in previous period.

Our regression analysis suggests that an increase in financial expenses, being the numerator in costs of funds ratio, positively influence the portfolio yield. One percent increase in costs of funds in previous period positively influences MFI's portfolio yield by 1.16 percent in the current period, with 95% confidence level.

An MFI can lower costs of funds by diversifying borrowing sources. Such a diversification allows for an MFI to optimize contract terms, improve the quality of financial portfolio and attract new partners. Costs of funds could be reduced if an MFI would attract more savings deposits; however that is not always possible due to impeding regulatory framework, current economic environment and size of MFI itself.

Finally, we find that an increase in average size of the loan which an MFI disbursed in

previous period has a positive impact on portfolio yield. This finding also underlies the theoretical aspect mentioned in previous chapters, e.g. it is more efficient for an MFI to issue 3 loans by ten thousands than 25 loans by 150 dollars.

5. CONCLUSIONS AND RECOMMENDATIONS

The main question of the thesis is, whether there is an evidence of a trade-off between the depth of outreach to the poor and path of profitability and self-sufficiency of MFIs.

In the second chapter, after introductory part the author focuses on microfinance mechanism essence, determining the reasons why the microfinance industry is growing, what role donors and microfinance institutions play in microfinance. Moreover, the clientele of microfinance services is also defined and presented the microeconomic view over microfinance mechanisms.

In the third chapter the author draws attention on the measurement of performance of MFIs mainly on their Outreach, Performance indicators and Financial Viability. Using various literature reviews and considering the specifics of the MFIs functioning, we have determined the accurate measures of above indicators.

Regarding the empirical part of the thesis, which is chapter four, it has been divided into two subchapters.

In the first subchapter, the analysis refers to Savings and Credit Associations (SCAs). The SCAs share in Moldovan' GDP is very small, comprising only 0.52 percent. Despite it, the role of SCAs shouldn't be underestimated as it occupies its own niche uncovered neither by commercial banks nor by MFIs. Target group of SCAs represent rural poor. The main share of loans disbursed is for agricultural sector and the main source of financing of SCAs are MFIs. People in rural areas of Moldova are not saving their money via SCAs and prefer to consume immediately what they have.

Second subchapter deals with main non-banking players on Moldovan market (Rural Finance Corporation, Microinvest and ProCredit). We have introduced the background of each institution, using the theoretical aspects presented in chapter 3 we have manually calculated the ratios and plotted the data, which was useful for the preliminary analysis. The main finding in this part is that above stated MFIs do not deal directly with the poorest being self-sufficient and profitable; it gives us the idea that they are for-profit organizations and do not completely follow the idea of microfinance concept of helping the poorest layers of society.

Furthermore, the author constructs 2 econometric models in order to reveal the dependence of portfolio yield and operational expense ratio. The models are tested then for normality of residuals and heteroskedacity to ensure that the output from the model is reliable.

Considering the high number of entities in Moldovan microfinance sector which creates a highly competitive environment, the analysis performed using outreach and financial performance indicators shows that MFIs loans are mainly disbursed into consumption, trade and real estate and not into agricultural sector. As of 2010 microfinance industry is in a decreasing trend where number of MFIs increased, while assets and loan and savings portfolio decreased.

The author believes that a developed microfinance industry is crucial for development of transitional countries such as Moldova and has a potential for a sustainable growth reaching more poor people, thereby strengthening the weak socio-economic environment inside the county.

Moldova is a highly dependent on the remittances. Current microfinance demand coverage expressed as a ratio of supply to demand is only 25% the annual demand estimated at 460M USD. Microfinance supply gap could be covered from remittances by directing the inflow of money into the microfinance sector. In turn it will have major economic impacts: contribute to the steady GDP growth, provide new employment opportunities and stimulate new non-agricultural business in rural areas, prevent exodus of the population from rural to urban areas and abroad.

References:

1. *Baltagi*, B.H, (*2001)*. *Econometric Analysis of Panel Data*, 2nd ed. Chichester, UK.
2. Balas Tomas (2009) *Comparison of the indicators describing the loan portfolio quality of the banking sector*. Report on financial Stability. Magyar Namzeti Bank.
3. Banerjee, A.V. (2000). *Contract Theory in Development Economics*. Mimeo. MIT.
4. Bayes (1999) *Village Pay Phones and Poverty Reduction*. Insights from a Grameen Bank Initiative from Bangladesh.
5. BizPro Moldova (2011), a case study by Victor Chiriac: "*Moldovan Savings and Credit associations' experience*" with collaboration of WOCCU and USAID.
6. Brandsma Judith and Laurence Hart (1998), *Making Microfinance Work Better in the Middle East and North Africa*, World Bank report, p.5
7. Busuioc A, Cicanci G. Munteanu A (2003) *Microfinance Development Strategy for the Republic of Moldova*, discussion paper, USAID project BIZPRO/MOLDOVA
8. CGAP and Rosenberg (2002) *Occasional Paper N1* revised November. p11.
9. Cull R, A Demirguc–Kunt and J Morduch (2007). *Financial performance and outreach*: *a global analysis of leading micro banks*. Economic Journal *Development* in World Development vol. 28 No. 4 Elsevier Science Ltd: Great Britain.
10. Dunford, C. (2000). T*he holy grail of microfinance: Helping the poor and sustainable? Small Enterprise Development*, 11, pp. 40–44.
11. Dunford, C. (2006) *Evidence of microfinance contribution to achieving the Millennium Development Goals*, Freedom from Hunger, USA.
12. Discussion paper: *Microfinance development strategy*, BIZPRO Moldova, 2003
13. *Eswaran,* M. and *Kotwal,* A., (*1990)*. *Demand Externality as an Impediment to Productivity Growth in Ldc'S*, UBC Departmental Archives pp. 90-23.
14. Feder, Gershon, Richard E. Just, and David Zilberman. (1985), *Adoption of Agricultural Innovations in Developing Countries*: A Survey. Economic Development and Cultural Change pp. 255-299.

15. Floro, S. and P. Yotopoulos (1991), *Informal Credit Markets and the New Institutional Economics.* The Case of Philippine Agriculture, Boulder, CO: Westview Press,
16. Hardy, Holden, Prokopenko (2002): *Microfinance Institutions and Public Policy*. IMF Working paper
17. Isabelle Barres, Tillman Bruett, Lynne Curran, Ana Escalona, Elena Patapievici Nelson, Dan Norell, Beth Porter (2005) *Measuring Performance of microfinance indicators: A framework for reporting, Analysis and Monitoring*. The SEPP Nework and alternative credit Technologies, LLC ISBN 0-9722582-7-2
18. Lafourcade, L., J. Isern, P. Mwangi and M. Brown (2005) *Overview of the Outreach and Financial Performance of Microfinance Institutions in Africa*, Washington D.C
19. Ledgerwood, J. (1999) *Sustainable Finance with the Poor, Micro finance Handbook: An Institutional and Financial Perspective.* Washington, D.C: The World Bank.
20. Mayoux, L (1995) *Beyond naivety: Women, gender inequality and participatory development - some thorny issues* Development and Change.
21. Meyer, R. L. (2002) *Track Record of Financial Institutions in Assisting the Poor in Asia*, ADB, Institute Research Paper, No 49, December 2002.
22. Morduch, J. (1999) *The Microfinance Promise* Journal of Economic Literature, Vol. 37, No. 4
23. Morduch, J. (2000): *The microfinance schism, in* World Development, Vol. 28, No. 4, pp. 617-629
24. Mutua, K., P. Nataradol, and M. Otero (1996), *The View from the Field: Perspectives from Managers of Microfinance Institutions*, Journal of International Development 8:2, pp. 179-193.
25. Navajas, S., M. Schreiner, R. L. Meyer, C. Gonzalez-Vega and J. Rodriguez-Meza (2000), *Micro credit and the Poorest of the Poor: Theory and Evidence from Bolivia*, *World Development*, Vol. 28, No. 2, pp. 333-346, Elsevier Science Ltd
26. Pitt, Mark M. and Shahidur R. Khandker, (1998), *The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter*? Journal of Political Economy, 106 (October*)*

27. Rahman, Animur (1999) *Micro-credit initiatives for equitable and sustainable".*
28. Robinson, M. (2001), *The Microfinance Revolution: Sustainable Finance for the Poor*, World Bank. Washington.
29. Saltzman B Sonya, Darcy Salinger (1998), *The ACCION CAMEL*. A technical note. pp. 3-4
30. Schneider Harmut (2007): "*Microfinance for the Poor?* " IFAD and OECD Development Centre. ISBN: 92-64-15415-9
31. Stefano Tonchia and Luca Quagini (2010): "*Performance measurement: Linking balances scorecard to business intelligence*". Springer Heidelberg Dordrecht London New York ISBN: 978-3-642-13234-6. pp. 5-15
32. Stiglitz, Avishay Braverman, Joseph E (2001), *The Economics of rural organization: theory, practice, and policy*.
33. Strategy Action Plan for non-banking financial market development in the period 2011-2014, *approved by Law no. 35 from 03.03.2011. Monitorul Oficial Nr. 143-148*
34. The Survey of SCA network, AGREX 2002.
35. The World Bank (2011) *Migration and Remittances Factbook*. 2nd edition.
36. Von Braun, J., Bouis, H., Kumar, S., Pandya-Lorch, R., (1992). *Improving Food Security of the Poor: Concept, Policy and Programs*. The International Food Policy Research Institute, 2033 K St, NW Washington, DC 20006-1002, USA.
37. Woller, G.M., C. Dunford and W. Woodworth (1999) *Where to microfinance*, International Journal of Economic Development, Vol. 1 No. 1 pp. 29-64.
38. Wydick, Bruce (1999), *Can Social Cohesion be Harnessed to Mitigate Market Failures*? Evidence from Group Lending in Guatemala,' Economic Journal, vol. 109 pp.463-75.
39. Zeller, M., G. Schrieder, J. von Braun and F. Heidhues (1997). *Rural Finance for Food Security for the Poor: implications for research and policy*. Food Policy Review 4. International Food Policy Research Institute: Washington DC, USA.
40. Zeller, M., Meyer, R. L. (2002): *The triangle of microfinance: financial sustainability, outreach, and impact*, Johns Hopkins University Press, Baltimore.

Internet sources:

1. www.microfinance.md "Rural Finance Corporation"
2. www.microinvest.md "Microinvest" institution
3. www.woccu.org World Council of Credit Unions
4. www.cder.md Coalition of the rural economy developing.
5. www.infomarket.md Agency of business news
6. www.ProCredit.md ProCredit microfinance institution
7. www.mixmarket.org Microfinance institutions database.
8. www.cnpf.md National Commission of Financial Market
9. www.cgap.org Independent policy and research center
10. www.statistica.md National bureau of Statistics
11. www.biztar.md The Business Regulatory and Tax Administration Reform Project
12. www.worldbank.org The World Bank Group

Appendix A: Main indicators of the MFI's activity during 2010

Nr. d/o	Denumirea OMF	Total Active	Împrumuturi acordate	Credite bancare și împr. primite	Profitul net (pierderea netă) al anului de gestiune	Capital Propriu
1	I.C.S. "Credit Rapid" S.R.L.	161 425 886	157 817 652	133 887 393	13 604 997	2 528 686
2	I.C.S. "First Financing Grup" S.R.L.	11 954 785	11 872 870	10 494 529	-440 588	-1 060 852
3	O.M.F. "Agur Invest" S.R.L.	105 087	93 000	92 000	-5 484	4 404
4	O.M.F. "SMS Credit" S.R.L.	1 389 438	1 077 507	940 152	398 106	436 992
5	O.M.F. "Credit-Profit" S.R.L.	22 728 254	14 038 193	20 070 585	1 114 471	2 149 166
6	O.M.F. "Priminvestnord" S.R.L.	1 149 430	1 099 699	879 775	204 744	261 413
7	I.C.S. "ProCredit" S.R.L.	84 035 444	52 860 192	69 157 460	-9 818 880	14 638 246
8	I.C.S. "Iute Credit" S.R.L.	14 366 815	9 839 229	5 239 599	1 859 338	4 489 525
9	O.M.F. "Visreal Prim" S.R.L.	309 973	290 636	0	55 237	309 973
10	I.C.S.O.M.F. "Nordik Capital" S.R.L.	15 271 057	8 331 418	0	-2 562 181	14 270 402
11	O.M.F. "Micro-Fin-Credit" S.R.L.	130 867	104 157	65 111	20 240	65 402
12	O.M.F. "Creditera" S.R.L.	25 775 714	23 678 274	16 609 034	5 438 732	9 151 646
13	O.M.F. "HML Company" S.R.L.	19 706 154	14 588 431	11 624 738	10 258 916	8 080 093
14	I.C.S. "Prime Capital" S.R.L.	305 744 570	307 859 508	111 633 571	33 510 021	177 205 017
15	I.M. "Prime Capital 2" S.R.L.	56 587 328	32 719 927	0	13 161 278	55 512 157
16	"Corporatia de Finantare Rurala" S.A.	267 274 899	106 995 285	172 269 475	5 679 263	90 711 668
17	I.C.S. "Easy Credit" S.R.L.	93 130 643	89 541 497	24 047 435	28 676 236	67 201 473
18	O.M.F. "Capital & Credit" S.R.L.	1 230 033	1 034 774	1 134 774	-14 525	-8 634
19	O.M.F. "CreditPlus" S.R.L.	1 767 167	1 074 872	1 652 381	-66 185	-61 833
20	O.M.F. "Credite Pentru Toti" S.R.L.	1 354 711	985 959	356 211	948 769	930 000
21	I.C.S.O.M.F. "Financiere d'Orsay" S.R.L.	57	0	0	-512	5
22	O.M.F. "Invest Credit" S.R.L.	11 867 893	10 728 435	3 447 696	2 863 138	7 721 691
23	I.M.O.M.F. "Microinvest" S.R.L.	353 575 716	171 139 083	247 867 773	-29 499 618	102 221 391
24	O.M.F. "Premium Invest" S.R.L.	3 743 860	2 429 946	3 344 502	-329 370	-415 317
25	O.M.F. "Elat Profit" S.R.L.	124 011 601	114 988 747	121 729 455	7 854 530	2 200 521
26	O.M.F. "Landmark" S.R.L.	1 299 114	966 270	1 039 957	-94 531	-99 506
27	O.M. "Creditbun"	773 264	480 180	485 294	130 328	135 728
28	I.C.S.O.M. "Express Leasing" S.R.L.	178 318 072	31 139 518	23 722 285	1 812 042	91 978 136
29	I.M.O.M. "Moldcredit" S.R.L.	12 139 432	11 437 860	6 514 363	44 229	5 544 229
30	O.M.F. "Unicredit" S.R.L.	8 844	0	0	-1 243	4 157
31	O.M. "Creditactiv" S.R.L.	8 986 616	8 771 995	8 837 180	134 558	139 958
32	OM "Bravo Credit" SRL	305 377	270 500	150 000	148 061	153 461
33	O.M, "Ideal Credit" S.R.L.	192 916	143 598	80 725	106 791	112 191
34	O.M. "Mega-Credit" S.R.L.	2 930 923	2 792 200	1 042 290	11 296	1 861 032
35	O.M.F. "Smart Credit" S.R.L.	301 283	297 692	268 708	25 976	31 376
36	O.M.F. "DirectCredit" S.R.L.	5 400	0	0	0	5 400
37	O.M.F. "StartCreditCom" S.R.L.	9 342	0	0	-54 838	-49 438
	TOTAL	**1 783 907 965**	**1 191 489 104**	**998 684 451**	**85 173 342**	**658 359 959**

Appendix B: General information on economic-financial situation of the SCA's as of the end of 2010

Nr ord	Denumirea asociaţiei de economii şi împrumut	Localitate	Raion	Depuneri de economii	Membri depunători	Împrumuturi acordate	Membri beneficiari de împrumut	Credite bancare şi împrumuturi primite	Capital propriu	Profitul net
1	AEÎ "Domulgeni"	Domulgeni	Floreşti	0	0	90355	21	0	101952	-53396
2	AEÎ "Bălăşeşti"	Bălăşeşti	Criuleni	0	0	94419	7	0	281007	27131
3	AEÎ "Sofmicrocredit"	Sofia	Drochia	1040209	88	1414244	183	170965	-54572	-521334
4	AEÎ "Credit-Class"	Crişcăuţi	Donduşeni	512003	203	750271	71	0	561357	35350
5	AEÎ "Cişmea"	Cîrnăţeni	Căuşeni	0	0	805278	81	681083	242622	-40800
6	AEÎ "Niorcăneanul"	Niorcani	Soroca	0	0	987077	77	958900	139636	-5100
7	AEÎ "Cărpineni"	Cărpineni	Hînceşti	0	0	60900	49	136001	-72526	-60601
8	AEÎ "Egoreni-Credit"	Egoreni	Soroca	0	0	87500	18	51000	52638	962
9	AEÎ "Meşeni Credit"	Meşeni	Rezina	0	0	56823	23	57400	33907	-8790
10	AEÎ "Ignat-Credit"	Ignăţei	Rezina	0	0	220680	71	161868	73985	21797
11	AEÎ "Olişcani"	Olişcani	Şoldăneşti	0	0	272200	48	49574	328608	31075
12	AEÎ "Coşniţa"	Coşniţa	Dubăsari	0	0	0	0	0	2391	-9
13	AEÎ "Lozova"	Lozova	Străşeni	281196	116	1376721	186	355957	853658	137926
14	AEÎ "Microîmprumut"	Ciorescu	Chişinău	615720	5	1537913	310	900000	143887	-37791
15	AEÎ "Şişcani"	Şişcani	Nisporeni	0	0	182500	21	45000	200040	24669
16	AEÎ "Cupcui Credit"	Cupcui	Leova	0	0	53760	17	0	93457	-9611
17	AEÎ "Colicăuţi"	Colicăuţi	Briceni	1867817	158	6288470	266	2871000	1751051	23201
18	AEÎ "Costuleni"	Costuleni	Ungheni	0	0	1120493	212	891777	346827	58481
19	AEÎ "Tîrnova"	Tîrnova	Donduşeni	0	0	597773	116	296900	-391265	-289006
20	AEÎ "Văratic-Plus"	Văratic	Rîşcani	0	0	125987	44	0	133783	33280
21	AEÎ "Viişoara-Domnească"	Viişoara	Glodeni	0	0	763070	129	569462	280683	125237
22	AEÎ "Mileştii Mici"	Mileştii Mici	Ialoveni	0	0	52791	8	0	158107	14769
23	AEÎ "Alfa-Star"	Tîrnova	Donduşeni	0	0	2175800	7	1479930	449407	74806
24	AEÎ "Moleşti"	Moleşti	Ialoveni	0	0	183074	262	45000	169014	-32376
25	AEÎ "Vorniceni"	Vorniceni	Străşeni	403367	11	1340694	114	977600	229299	-115745
26	AEÎ "Nimoreni"	Nimoreni	Ialoveni	1056887	19	1443208	210	100325	457229	-148242
27	AEÎ "Hăsnăşenii Mari"	Hăsnăşenii Mari	Drochia	27110	3	0	52	49076	-221067	67028
28	AEÎ "Rubleniţa-Credit"	Rubleniţa	Soroca	0	0	180326	37	0	135872	-45002
29	AEÎ "Credit Prim"	Voinova	Străşeni	0	0	20000	7	0	139686	-1852
30	AEÎ "Microcredit"	Ungheni	Ungheni	1012646	14	1375898	204	1070249	249160	-21770
31	AEÎ "SISTEMCREDIT"	Pîrliţa	Făleşti	0	0	205029	27	202628	-390090	-405428
32	AEÎ "Măcăreşti"	Măcăreşti	Ungheni	0	0	301883	77	198728	139044	11437
33	AEÎ "Bădiceni"	Bădiceni	Soroca	0	0	15978	2	0	-212	-67383
34	AEÎ "Baroncea"	Baroncea	Drochia	0	0	0	0	0	25608	-13276
35	AEÎ "Lopatnic"	Lopatnic	Edineţ	0	4	3834	5	0	30641	3237
36	AEÎ "Izvoarele Oniţcani"	Oniţcani	Criuleni	0	0	0	0	0	2996	9665
37	AEÎ "Cuconeştii Noi"	Cuconeştii Noi	Edineţ	0	0	499278	59	242200	-82010	-121788
38	AEÎ "Credite-Ţaul"	Ţaul	Donduşeni	0	0	629262	87	282007	68412	-189301
39	AEÎ "Marcredit"	Maramonovca	Drochia	0	0	103394	23	0	154332	18332
40	AEÎ "Orhei Credit"	Orhei	Orhei	0	0	0	0	0	35075	2310
41	AEÎ "Mănoileşti"	Mănoileşti	Ungheni	0	0	829224	109	520407	406805	55654

42	AEÎ din Rediul Mare	Rediul Mare	Dondușeni	0	0	574026	84	261203	381057	50390
43	AEÎ "Briceneanca"	Briceni	Dondușeni	0	0	43624	7	23558	51694	-12305
44	AEÎ "Șofrîncani"	Șofrîncani	Edineț	0	4	397535	54	142857	382741	150113
45	AEÎ "Grimăncăuți"	Grimăncăuți	Briceni	0	0	2174000	141	139882	2186783	329263
46	AEÎ "Petrești"	Petrești	Ungheni	0	0	284514	85	124088	190981	31933
47	AEÎ "Credite-Sauca"	Sauca	Ocnița	0	0	357050	51	152910	262628	32020
48	AEÎ "Credite-Coteala"	Coteala	Briceni	0	0	474900	176	325253	286943	14903
49	AEÎ "Aluniș"	Aluniș	Rîșcani	0	0	103394	23	0	154332	18332
50	AEÎ "Credite-Sudarca"	Sudarca	Dondușeni	23645	3	0	25	0	-18242	-294996
51	AEÎ "Zăbriceni"	Zăbriceni	Edineț	0	0	357151	98	150323	215628	-14278
52	AEÎ "Cotiujeni"	Cotiujeni	Briceni	0	0	1312009	153	776749	727933	110129
53	AEÎ "Hiroveanca"	Hirova	Călărași	0	0	121786	12	0	128004	5467
54	AEÎ "Boianca Nord"	Gribova	Drochia	0	0	440803	44	0	52491	-354641
55	AEÎ "Discocredit"	Săseni	Călărași	0	0	0	0	0	2141	-80
56	AEÎ "Coșerniteanca-Prim"	Coșernița	Criuleni	0	0	103966	14	0	180726	24021
57	AEÎ "Leufin"	Costești	Ialoveni	0	0	1984464	450	3388758	-1817553	-481858
58	AEÎ "Șoldănești Credit"	Șoldănești	Soldănești	0	0	81640	75	3955	106627	-45476
59	AEÎ "Rural-Fin"	Tănătarii Noi	Căușeni	0	0	88800	14	37113	74575	4425
60	AEÎ "Suport-Speranța"	Mihailovca	Cimișlia	0	0	285222	42	214792	112612	8134
61	AEÎ "Unțești"	Unțești	Ungheni	0	0	171667	20	0	57563	-154056
62	AEÎ "Valea Mare"	Valea Mare	Ungheni	0	0	439554	127	262200	375950	55011
63	AEÎ "Hîrtop-Lărgeni"	Hîrtop	Cantemir	0	0	408115	31	322000	79434	2412
64	AEÎ "Lărguța"	Lărguța	Cantemir	0	0	970906	74	776033	278197	454

65	AEÎ "Risipeni"	Risipeni	Fălești	0	0	26437	9	0	57513	11582
66	AEÎ "Credo Succes"	Milestii Mici	Ialoveni	0	2	3202910	180	3413499	604660	-13542
67	AEÎ "Finagrocredit"	Criva	Briceni	35000	8	4114365	198	3501288	-2299298	-2331366
68	AEÎ "Fermier-Credit"	Step-Soci	Orhei	0	0	422192	57	276000	242712	7179
69	AEÎ "Stînca"	Roșietici	Florești	0	0	943830	100	795840	301587	-13878
70	AEÎ "Corjovo"	Corjova	Criuleni	0	0	175948	10	0	85829	12109
71	AEÎ "Dubăsarii Vechi"	Dubăsarii Vechi	Criuleni	2820462	55	3956380	282	998500	689596	216315
72	AEÎ "Selemet-Fin"	Selemet	Cimișlia	0	0	108200	9	0	96524	8741
73	AEÎ "Leușeni Credit"	Leușeni	Telenești	0	0	0	84	463837	-420381	-7686
74	AEÎ "Leușeni"	Leușeni	Hîncești	0	0	0	0	0	1402	-8930
75	AEÎ "Cruglic"	Cruglic	Criuleni	1153000	32	1444141	165	0	424892	113439
76	AEÎ "Zîmbreni"	Zîmbreni	Ialoveni	0	0	0	109	527000	-615321	-801076
77	AEÎ "Malcoci"	Malcoci	Ialoveni	0	0	99557	14	26672	165981	-1623
78	AEÎ "Puhoi"	Puhoi	Ialoveni	0	0	468143	148	252465	265141	33212
79	AEÎ "Furnica-Răzeni"	Răzeni	Ialoveni	0	0	1065544	184	777328	417126	58312
80	AEÎ "Sadova"	Sadova	Călărași	0	0	10000	2	0	77358	1977
81	AEÎ "Ilenuța"	Ilenuța	Fălești	0	0	96429	9	29625	-41278	-105639
82	AEÎ "Suhuluceni-Credit"	Suhuluceni	Telenești	0	0	427212	113	263352	248663	2537
83	AEÎ "Negureni Credit"	Negureni	Telenești	0	0	0	36	0	210460	-109093
84	AEÎ "Tîrșiței"	Tîrșiței	Telenești	0	0	358738	112	325148	105040	27694
85	AEÎ "Bahmut"	Bahmut	Călărași	0	0	12375	2	0	62328	-26983
86	AEÎ "Trestieni-Invest"	Valea-Trestieni	Nisporeni	30000	1	1976550	94	1481500	322988	-99264
87	AEÎ "Boldurești"	Boldurești	Nisporeni	0	0	651781	52	321281	447812	80594
88	AEÎ "Rădeni"	Rădeni	Călărași	0	0	46500	8	0	52680	2308

89	AEÎ "Supercredit"	Pîrjota	Rîşcani	1637145	66	2351829	249	482613	408542	-47353
90	AEÎ "Circular-Fin"	Gălăşeni	Rîşcani	2816904	162	4002742	333	641	769594	-745661
91	AEÎ "Chiţcanii Vechi"	Chiţcanii Vechi	Teleneşti	0	0	62168	10	0	179098	12790
92	AEÎ "Vărăncău"	Vărăncău	Soroca	11000	1	0	26	0	-43750	11802
93	AEÎ "Japca"	Japca	Floreşti	0	0	113800	104	128167	58083	-15209
94	AEÎ "Ochiul Alb"	Ochiul Alb	Drochia	3049251	119	3345183	331	0	818393	134796
95	AEÎ "Popeşti"	Popeştii de Jos	Drochia	99237	14	6620	21	0	-6848	-168129
96	AEÎ "Bravicea"	Bravicea	Călăraşi	0	0	207749	71	151122	90345	15209
97	AEÎ "Prepeliţa"	Prepeliţa	Sîngerei	0	0	49700	10	0	110220	-19559
98	AEÎ "Şolcani"	Şolcani	Soroca	0	0	124525	26	0	378433	133998
99	AEÎ "Tătărăuca Veche"	Tătărăuca Veche	Soroca	0	0	215065	50	0	163890	-46405
100	AEÎ "Ţepilova"	Ţepilova	Soroca	0	0	226950	113	145433	148498	-12597
101	AEÎ "Holoşniţa"	Holoşniţa	Soroca	0	0	44680	10	0	46830	-12953
102	AEÎ "Dărcăuţenii"	Dărcăuţi	Soroca	0	0	74500	86	344487	-713549	-234924
103	AEÎ "Ecocred-Dîngeni"	Dîngeni	Ocniţa	953040	39	1308712	208	73000	689251	481
104	AEÎ "Credite-Hlinaia"	Hlinaia	Edineţ	0	0	865809	96	516832	-567026	-170921
105	AEÎ "Credite din Clocuşna"	Clocuşna	Ocniţa	0	0	419290	132	378310	88812	-8763
106	AEÎ "Credite-Bîrnova"	Bîrnova	Ocniţa	0	0	532818	43	60018	520926	84775
107	AEÎ "Fetica-Credit"	Feteşti	Edineţ	825259	55	1174210	141	0	562889	14879
108	AEÎ "Creditconsum"	Şirăuţi	Briceni	0	4	531581	77	350297	101108	-62968
109	AEÎ "Credite-Drepcăuţi"	Drepcăuţi	Briceni	0	4	0	47	0	24690	-104327
110	AEÎ "Bîrlădeni"	Bîrlădeni	Ocniţa	731686	3	1791640	168	1082000	-1360198	-575299
111	AEÎ "Puhăceni"	Puhăceni	Anenii Noi	0	0	124200	26	0	134254	-69290
112	AEÎ "Lencăuţi"	Lencăuţi	Ocniţa	0	0	242258	46	0	177310	11596
113	AEÎ "Credite Hădărăuţi"	Hădărăuţi	Ocniţa	267900	14	963456	110	261193	-240496	-689461
114	AEÎ "Credite-Corestăuţi"	Corestăuţi	Ocniţa	0	0	25485	5	0	62715	-7911
115	AEÎ "Credite din Terebna"	Terebna	Edineţ	0	0	183835	40	49299	160808	27023
116	AEÎ "Bani Expres"	Ocniţa	Ocniţa	0	0	778011	83	212000	-38709	-551329
117	AEÎ "Bardar"	Bardar	Ialoveni	0	0	30766	72	0	129725	312338
118	AEÎ "Grătieşti"	Grătieşti	Chişinău	0	0	692491	202	609949	100277	-199947
119	AEÎ "Ulmu"	Ulmu	Ialoveni	0	0	583800	76	431859	168387	9961
120	AEÎ "Hruşova"	Hruşova	Criuleni	4279457	91	5138979	698	0	1652391	552844
121	AEÎ "Speia"	Speia	Anenii Noi	0	0	590687	114	380542	257023	42130
122	AEÎ "Cimişeni"	Cimişeni	Criuleni	0	0	472717	99	315112	185957	15284
123	AEÎ "Antoneşti-Prim"	Antoneşti	Cantemir	0	0	75970	8	0	85953	317
124	AEÎ "Costangalia-Can"	Coştangalia	Cantemir	0	0	240463	36	328267	40300	701
125	AEÎ "Rădoaia"	Rădoaia	Sîngerei	0	4	845850	119	610104	306598	45134
126	AEÎ "Hîjdieni"	Hîjdieni	Glodeni	0	0	1247790	279	899768	424348	77283
127	AEÎ "Baurci-Moldoveni"	Baurci-Moldoveni	Cahul	0	0	74166	7	0	58601	35361
128	AEÎ "Credite-Gîrbova"	Gîrbova	Ocniţa	103423	4	409859	32	43002	123918	-118223
129	AEÎ "Credite-Donduşeni"	Donduşeni	Donduşeni	0	0	0	66	0	124332	-113081
130	AEÎ "Cazangic"	Cazangic	Leova	0	0	119211	17	0	117431	22254
131	AEÎ "DRODANA"	Drochia	Drochia	0	0	57000	19	0	102026	73306
132	AEÎ "Recea-Fin"	Recea	Rîşcani	0	4	918032	148	694138	267737	33992

133	AEÎ "Cobusca Veche"	Cobusca Veche	Anenii Noi	0	0	449406	75	245500	222124	68278
134	AEÎ "Economcredit"	Codreanca	Străşeni	1628749	93	1883362	294	9122	572886	127069
135	AEÎ "Hîjdieni-Credit"	Hîjdieni	Orhei	0	0	87500	22	0	111086	2731
136	AEÎ "Voloviţa"	Voloviţa	Soroca	0	0	305597	46	150000	139381	40573
137	AEÎ "Avantaj-Credit"	Horodişte	Rîşcani	0	0	442623	46	275850	-302599	-280621
138	AEÎ "Ciuteşti"	Ciuteşti	Nisporeni	0	0	1477349	62	674900	256838	71364
139	AEÎ "Horodişteanul"	Horodişte	Donduşeni	0	0	0	25	0	-3715	-9900
140	AEÎ "Baştina-Pelinei"	Pelinei	Cahul	0	0	362337	56	241277	125847	6060
141	AEÎ "Şuri"	Şuri	Drochia	0	0	227700	50	0	295659	24913
142	AEÎ "Tigheci-Credit"	Tigheci	Leova	0	0	129304	37	46795	102411	16375
143	AEÎ "Fincredsor"	Cremenciug	Soroca	0	0	2303000	93	1967900	215017	-155938
144	AEÎ "Oxentea"	Oxentea	Dubăsari	1191572	22	1315557	247	0	422533	83803
145	AEÎ "Corneşti"	Corneşti	Ungheni	0	3	702480	121	301326	479199	21805
146	AEÎ "Todireşti"	Todireşti	Ungheni	0	0	271745	83	74980	228850	30672
147	AEÎ "Buşila"	Buşila	Ungheni	0	0	626670	273	558900	208682	-41780
148	AEÎ "Izvoare"	Izvoare	Floreşti	0	0	156230	28	41585	128384	9650
149	AEÎ "Chirileni"	Chirileni	Ungheni	0	0	143200	21	36960	157790	30156
150	AEÎ "Sculeni"	Sculeni	Ungheni	1485136	25	2128058	360	462500	1001048	194864
151	AEÎ "Rădenii-Vechi"	Rădenii Vechi	Ungheni	0	0	0	3	0	16466	-8529
152	AEÎ "Ciuciulea"	Ciuciulea	Glodeni	2203527	94	2083782	163	0	320154	-236161
153	AEÎ "Năvîrneţ"	Năvîrneţ	Făleşti	0	0	770548	65	361436	278881	-66317
154	AEÎ "Hiliuţi-Rîşcani"	Hiliuţi	Rîşcani	0	0	231565	34	0	343220	73350
155	AEÎ din Svetlîi	Svetlîi	UTA Găgăuzia	0	0	100000	24	100000	-6955	-2562
156	AEÎ "Hristici"	Hristici	Soroca	0	0	0	0	21687	37825	304
157	AEÎ "Brînzenii Vechi"	Brînzenii Vechi	Teleneşti	1103000	39	1153174	55	0	1193214	219620

158	AEÎ "Seliţte"	Seliţte	Nisporeni	0	0	45070	9	0	88579	-41421
159	AEÎ "Popinţeni"	Bălăneşti	Nisporeni	107522	129	604471	29	350070	343275	118
160	AEÎ "Rădulenii-Vechi"	Rădulenii Vechi	Floreşti	0	0	0	0	0	63918	-3552
161	AEÎ "Zberoaia"	Zberoaia	Nisporeni	0	0	239200	26	0	179012	2396
162	AEÎ "Caracui"	Caracui	Hînceşti	0	0	230663	51	124901	65239	72924
163	AEÎ "Coşcalia"	Coşcalia	Căuşeni	0	0	200002	55	170091	74929	4460
164	AEÎ "Grozeşti"	Grozeşti	Nisporeni	0	0	373608	39	0	306960	49594
165	AEÎ "Sineşti"	Sineşti	Ungheni	0	0	85662	58	40000	62557	3868
166	AEÎ "Satul Nou"	Satul Nou	Cimişlia	0	0	61060	30	62395	6971	3708
167	AEÎ "Holercani"	Holercani	Dubăsari	1218519	34	2079432	286	610087	563070	114817
168	AEÎ "Molovata"	Molovata	Dubăsari	0	0	394440	112	339800	127675	5490
169	AEÎ "Bădragii Noi"	Bădragii Noi	Edineţ	0	0	1520096	106	1203236	-1886464	-425469
170	AEÎ "Jevreni"	Jevreni	Criuleni	0	0	0	62	0	93726	2047
171	AEÎ "Mihăileni"	Mihăileni	Rîşcani	2860923	113	3428508	292	500000	1006908	311938
172	AEÎ "Larga Nouă"	Larga Nouă	Cahul	0	0	81851	13	0	78025	-75651
173	AEÎ "Burlacu"	Burlacu	Cahul	0	0	43038	8	0	63339	18345
174	AEÎ "Holmagea"	Iujnoe	Cahul	0	0	464778	52	364595	6547	-50014
175	AEÎ "Enichioi"	Enichioi	Cantemir	0	0	682440	39	672000	177925	-12204
176	AEÎ "Haragîş"	Haragîş	Cantemir	0	0	461304	45	335000	74944	17150
177	AEÎ "Bulboceanca"	Bulboaca	Anenii Noi	0	0	108712	46	0	12427	-33659
178	AEÎ "Frumoasa"	Frumoasa	Călăraşi	0	0	489494	29	200000	315986	70171
179	AEÎ "Glinjeni"	Glinjeni	Făleşti	0	0	150832	197	0	165969	-7798
180	AEÎ "Doltu"	Doltu	Făleşti	0	0	187760	35	0	208038	30904
181	AEÎ "Zgărdeşti"	Zgărdeşti	Teleneşti	0	0	12178	6	0	32615	-22203
182	AEÎ "Onişcani"	Onişcani	Călăraşi	0	0	96404	48	40577	53535	2404

183	AEÎ "Hîrtopul Mare"	Hîrtopul Mare	Criuleni	0	0	475300	26	105546	379919	83164
184	AEÎ "Slobozia-Duşca"	Slobozia-Duşca	Criuleni	0	0	488036	165	278875	423205	80573
185	AEÎ "Ustia"	Ustia	Dubăsari	0	0	463860	66	416082	142315	15827
186	AEÎ "Prodăneşti"	Prodăneşti	Floreşti	0	0	416146	112	0	399807	83062
187	AEÎ "Şipotul Ghervas"	Hîrtop	Cimişlia	0	0	232909	15	162354	65591	-39299
188	AEÎ "Cotiujenii Mari Credit"	Cotiujenii Mari	Şoldăneşti	0	0	308298	118	161708	196270	2347
189	AEÎ "Acces Rapid"	Coşerniţa	Floreşti	0	0	478038	123	311019	239809	93768
190	AEÎ "Antoneşti"	Antoneşti	Ştefan Vodă	0	0	443376	57	334500	177683	26172
191	AEÎ "Sevirova"	Sevirova	Floreşti	0	0	102610	39	79411	43937	1728
192	AEÎ "Ştefăneşti"	Ştefăneşti	Floreşti	1490268	41	1116144	119	200000	439854	65411
193	AEÎ "W-Frumuşica"	Frumuşica	Floreşti	0	0	160400	105	6525	220633	-7305
194	AEÎ "Putineşti"	Putineşti	Floreşti	0	4	188198	48	86199	141244	31226
195	AEÎ "Nistru de Jos"	Talmaza	Ştefan Vodă	0	0	582940	66	200190	586186	30058
196	AEÎ "Bălăureşti"	Bălăureşti	Nisporeni	1202334	18	3008073	340	1064348	924429	173041
197	AEÎ "Corjeuţi"	Corjeuţi	Briceni	1033311	28	2097031	106	794566	619939	233890
198	AEÎ "Econom Fix"	Gura Camencii	Floreşti	210127	15	1122090	59	518542	166515	37829
199	AEÎ "Visoca"	Visoca	Soroca	0	0	506944	24	48719	176882	166913
200	AEÎ "Pelinia"	Pelinia	Drochia	914420	47	2213535	382	439280	957089	160204
201	AEÎ "Caşunca"	Caşunca	Floreşti	1368318	197	2119744	363	330000	567847	156232
202	AEÎ "Tartaul"	Tartaul	Cantemir	0	0	353872	51	117403	252732	44832
203	AEÎ "Cărbuna"	Cărbuna	Ialoveni	0	0	62829	38	40734	31171	540
204	AEÎ "Sfîntul Nicolae"	Săiţi	Căuşeni	0	0	95400	28	0	99059	46
205	AEÎ "Arsul"	Ucrainca	Căuşeni	0	0	131598	46	124202	29625	-2878

206	AEÎ "Mărineşti"	Mărineşti	Singerei	1368439	33	1581466	129	333580	430068	-421715
207	AEÎ "Duşmani"	Duşmani	Glodeni	0	4	26542	65	0	155759	16023
208	AEÎ "Frasin din Popeasca"	Popeasca	Ştefan Vodă	0	0	147580	9	0	189196	36677
209	AEÎ "Crihana Veche"	Crihana Veche	Cahul	0	0	596654	132	135768	481661	69831
210	AEÎ "Colibaşi Credit"	Colibaşi	Cahul	0	0	483506	112	0	499105	28846
211	AEÎ "Izvoraşul Haiducului"	Tănătari	Căuşeni	851323	1	702429	168	0	438250	43460
212	AEÎ "Albina"	Sălcuţa	Căuşeni	0	0	200000	38	0	359766	16325
213	AEÎ "Pituşca"	Pituşca	Călăraşi	1093350	133	2358952	280	249152	1145014	248739
214	AEÎ "Răciula"	Răciula	Călăraşi	0	0	1297940	44	1243048	111758	-145865
215	AEÎ "Valea Finului"	Ermoclia	Ştefan Vodă	0	0	2358700	144	2284500	367414	-8798
216	AEÎ "Geamna-Prim"	Răscăieţi	Ştefan Vodă	0	0	373436	126	139555	268167	45154
217	AEÎ "Plopi"	Plop-Ştiubei	Căuşeni	977525	106	1313722	154	0	495606	60826
218	AEÎ "Mercurius din Meleşeni"	Meleşeni	Călăraşi	0	0	22485	6	0	12244	-4643
219	AEÎ "Velino-Prim"	Săseni	Călăraşi	0	0	0	0	0	78250	-80
220	AEÎ "Vatici Credit"	Vatici	Orhei	0	0	461141	63	305817	122928	-8528
221	AEÎ "Valea Leoanei"	Copanca	Căuşeni	0	0	218635	93	147244	86740	-226858
222	AEÎ "Corpaci"	Corpaci	Edineţ	0	0	281743	95	26960	318038	-7391
223	AEÎ "Chircăieştii Noi"	Chircăieştii Noi	Căuşeni	0	0	0	16	0	-6045	187048
224	AEÎ "Caracui-Har"	Baimaclia	Căuşeni	0	0	416966	70	380335	140778	15878
225	AEÎ "Cîrnăţenii Noi"	Cîrnăţenii Noi	Căuşeni	0	0	162190	23	0	158921	5379
226	AEÎ "Ciuciuleni-Credit"	Ciuciuleni	Hînceşti	2705836	121	3345900	232	0	1505732	183455

227	AEÎ "Valea Podului"	Zaim	Căuşeni	2184578	52	1321920	175	0	-489371	-714499
228	AEÎ "Firlădeni"	Firlădeni	Căuşeni	0	0	108900	26	118190	30719	8028
229	AEÎ "Cogâlnic"	Logăneşti	Hînceşti	0	0	713700	90	434100	498230	21087
230	AEÎ "Balasineşti"	Balasineşti	Briceni	0	0	664082	163	265347	487444	82858
231	AEÎ "Elizomon"	Corjeuţi	Briceni	3616473	70	5301357	266	300020	2394799	461755
232	AEÎ "Izvorul Rece"	Fundul Galbenei	Hînceşti	0	0	98554	19	0	129944	12040
233	AEÎ "Drăguşul"	Pereni	Hînceşti	0	0	105532	18	0	202541	22722
234	AEÎ "Cucoreanca"	Cucoara	Cahul	0	0	820000	92	700000	111800	0
235	AEÎ "Credite din Baraboi"	Baraboi	Donduşeni	0	0	260200	43	0	425916	43680
236	AEÎ "Bleşteni-Volodeni"	Bleşteni	Edineţ	225072	45	621258	40	361800	348102	20160
237	AEÎ "Eftodie"	Andruşul de Jos	Cahul	0	0	390515	48	0	445642	84740
238	AEÎ "AEIBE"	Brînzeni	Edineţ	0	0	221800	26	39700	260175	20794
239	AEÎ "Baştina-Mereşeni"	Mereşeni	Hînceşti	0	0	295100	44	0	351231	26310
240	AEÎ "Goteşti"	Goteşti	Cantemir	0	0	407301	97	162000	320724	33405
241	AEÎ "Faguras-Vadul lui Isac"	Vadul lui Isac	Cahul	760137	23	1137289	181	198201	503119	78608
242	AEÎ "Horja"	Negrea	Hînceşti	0	0	155600	68	144826	32246	-4659
243	AEÎ "Prim-Credit Rosu"	Roşu	Cahul	0	0	564426	114	0	676950	130555
244	AEÎ "Traian-Paşcani"	Paşcani	Cahul	0	0	304965	51	167305	330862	560
245	AEÎ "Andruşanca"	Andruşul de Sus	Cahul	0	0	721334	97	504642	435820	8836
246	AEÎ "Vişniovca"	Vişniovca	Cantemir	0	0	5500	1	0	51354	-4392
247	AEÎ "Filipeni"	Filipeni	Leova	0	0	112179	24	0	311377	37534
248	AEÎ "Mărţişor-Văleni"	Văleni	Cahul	0	0	392692	70	0	513234	54007
249	AEÎ "Sadîc"	Sadîc	Cantemir	0	0	148346	9	87051	129208	45057
250	AEÎ "Taraclia de Salcie"	Taraclia de Salcie	Cahul	0	0	107800	28	0	128117	26431
251	AEÎ "Ţărăncuţa Credit"	Ţărăncuţa	Cantemir	0	0	16200	27	0	49274	4889
252	AEÎ "Valea Vîlcului"	Bujor	Hînceşti	2600611	628	3059701	487	323500	1067262	215212
253	AEÎ "Burlăneşti"	Burlăneşti	Edineţ	0	0	383058	0	62868	166398	-212340
254	AEÎ "Gordineşti-Edineţ"	Gordineşti	Edineţ	0	0	270952	22	0	195047	13778
255	AEÎ "Codreanca"	Stolniceni	Hînceşti	0	0	133800	14	0	321086	18644
256	AEÎ din Cernoleuca	Cernoleuca	Donduşeni	0	0	723831	103	0	759189	71597
257	AEÎ "Credite din Corbu"	Corbu	Donduşeni	0	0	1138622	117	1021700	296162	18786
258	AEÎ "Hîna"	Hîna	Briceni	0	0	153500	162	0	416498	71522
259	AEÎ "Credite-Larga"	Larga	Briceni	1212630	71	2649208	506	315000	1439150	179900
260	AEÎ "Legenda"	Logăneşti	Hînceşti	0	0	235000	23	140000	155305	-1899
261	AEÎ "Plop"	Plop	Donduşeni	0	4	295695	124	135952	201582	5495
262	AEÎ "Credite-Pererita"	Pererita	Briceni	0	4	315000	82	0	733299	83995
263	AEÎ "Căplani"	Căplani	Ştefan Vodă	0	0	845814	56	956155	545857	-2870
264	AEÎ "Valul lui Traian"	Ursoaia	Căuşeni	0	0	264256	36	0	313956	36797
265	AEÎ "Agrocredit"	Tabani	Briceni	0	0	1649800	173	850199	1006775	110008
266	AEÎ din Trinca	Trinca	Edineţ	0	0	548730	114	0	627614	1959
267	AEÎ "Primcredit"	Viişoara	Edineţ	861290	34	1680396	241	0	677299	230832
268	AEÎ "Botna"'	Costeşti	Ialoveni	7960214	0	9540920	0	0	4580341	972570
269	AEÎ "Gura Bîcului"	Gura Bîcului	Anenii Noi	0	0	565800	60	155206	491141	82282

270	AEÎ "Hîrtopul Mic"	Hîrtopul Mic	Criuleni	0	0	724778	85	596905	343183	33317
271	AEÎ "Mereni"	Mereni	Anenii Noi	2771076	93	1958425	90	0	-401966	-1005381
272	AEÎ "Recea"	Recea	Străşeni	0	0	134915	174	0	67950	-90628
273	AEÎ "Triumf"	Tătăreşti	Străşeni	0	0	609166	135	300092	444026	41935
274	AEÎ "Horăşti"	Horeşti	Ialoveni	1363577	263	1479350	138	0	436396	77369
275	AEÎ "Maşcăuţi"	Maşcăuţi	Criuleni	0	0	659429	76	442000	350564	30181
276	AEÎ "Aluatu-Marioara"	Aluatu	Taraclia	0	0	62467	7	0	89563	5440
277	AEÎ "Valea Dorului"	Podgoreni	Orhei	0	0	12911	23	0	53454	9832
278	AEÎ "Cetatea"	Echimăuţi	Rezina	0	0	0	0	0	178151	43376
279	AEÎ "Horodişte Credit"	Horodişte	Rezina	0	0	271895	42	318850	-82494	-90103
280	AEÎ "Răspopeni-Credit"	Răspopeni	Şoldăneşti	0	0	144729	22	4	250719	35767
281	AEÎ "Cogîlniceni Credit"	Cogîlniceni	Rezina	0	0	61000	54	0	75847	1302
282	AEÎ "Susleni"	Susleni	Orhei	54478	4	95458	66	280670	-289169	-239181
283	AEÎ "Pohrebeni Credit"	Pohrebeni	Orhei	0	0	57084	12	0	131593	9723
284	AEÎ "Valea Teiului"	Chiperceni	Orhei	42966	1	0	11	15651	-124855	-24263
285	AEÎ "Budăi"	Budăi	Teleneşti	727435	33	7500	39	0	-602900	-738607
286	AEÎ "Andrieş-Credit"	Sirota	Orhei	0	0	0	0	16	43361	17692
287	AEÎ "Conacul Boierului"	Piatra	Orhei	0	0	48000	52	305705	-353394	-273376
288	AEÎ "CiocîlteniCredit"	Ciocîlteni	Orhei	0	0	256679	139	33891	313595	-12541
289	AEÎ "Tutunarii"	Vorotet	Orhei	0	0	55500	13	0	116906	12167
290	AEÎ "Izvorul"	Tabăra	Orhei	0	0	350198	75	147390	268617	13832

291	AEÎ "Mătrăşanca"	Bieşti	Orhei	0	0	123639	17	0	157930	-2876
292	AEÎ "Puţintei"	Puţintei	Orhei	0	0	261785	66	127426	160955	12930
293	AEÎ "Muşeţel"	Jeloboc	Orhei	0	0	791894	160	671966	273424	3874
294	AEÎ "Lumina Credit"	Jora de Mijloc	Orhei	0	0	26000	3	0	17398	3033
295	AEÎ "Cucuruzeni Credit"	Cucuruzeni	Orhei	0	0	102805	19	28289	103093	19662
296	AEÎ "Unirea-Căzăneşti"	Căzăneşti	Teleneşti	0	0	69000	10	0	110598	-228890
297	AEÎ "Pădureanca"	Ţahnăuţi	Rezina	0	0	0	28	0	-13776	30335
298	AEÎ "Scala Corbului"	Trebujeni	Orhei	0	0	236196	89	37829	200738	-10754
299	AEÎ "Diaconiţa"	Şestaci	Şoldăneşti	0	0	25000	3	0	160615	20028
300	AEÎ "Doibăniţa"	Ţareuca	Rezina	0	0	242604	50	227267	27903	-27450
301	AEÎ "Cobîlea"	Cobîlea	Şoldăneşti	0	0	390992	74	149349	267325	-42617
302	AEÎ "Ghiduleni"	Ghiduleni	Rezina	0	0	191600	50	0	232928	19120
303	AEÎ "Trifan Credit"	Trifeşti	Rezina	0	0	49691	22	0	82359	-21859
304	AEÎ "Sămăşcani"	Sămăşcani	Şoldăneşti	0	0	319000	69	0	317016	47144
305	AEÎ "Şipceanca"	Şipca	Şoldăneşti	0	0	77708	10	0	123808	-9693
306	AEÎ "Prometeu"	Mateuţi	Rezina	0	0	258863	87	0	333976	39637
307	AEÎ "Pripiceni Credit"	Pripiceni-Răzeşi	Rezina	0	0	51656	12	0	16503	-49048
308	AEÎ "Izvoraş Credit"	Buşăuca	Rezina	0	0	105900	30	0	122300	-527
309	AEÎ "Fuzăuca"	Fuzăuca	Şoldăneşti	0	0	91800	25	50610	72581	-3508
310	AEÎ "Comorile Plaiului"	Mîrzeşti	Orhei	0	0	138067	20	6522	37719	-95263
311	AEÎ din Pistruieni	Pistruieni	Teleneşti	0	0	27947	10	0	65009	1059
312	AEÎ "Rural Credit"	Step-Soci	Orhei	1448781	49	2309390	359	365522	1039157	386746
313	AEÎ "Vadul-Raşcov"	Vadul-Raşcov	Şoldăneşti	0	0	92200	25	30600	54377	-2341

314	AEÎ "Valea Nistrului"	Tarasova	Rezina	0	0	44285	30	31618	35641	-6274
315	AEÎ "Alcedar-Credit"	Alcedar	Şoldăneşti	0	0	8000	2	0	110640	-5715
316	AEÎ "Cuşmirca"	Cuşmirca	Şoldăneşti	0	0	82300	24	0	75560	72524
317	AEÎ "Chipeşca"	Chipeşca	Şoldăneşti	0	0	0	10	0	36928	3791
318	AEÎ "Scînteia Ineşti "	Ineşti	Teleneşti	0	0	94620	140	121203	175566	41494
319	AEÎ "Divers Credit"	mun. Chişinau	Chişinau	0	0	0	0	0	8450	-1550
320	AEÎ "Dănceni"	Dănceni	Ialoveni	0	0	571198	73	559700	59406	676340
321	AEÎ "Împrumutul"	Ignăţei	Rezina	0	0	86817	0	0	114210	11888
322	AEÎ "Teţcani"	Teţcani	Briceni	123600	8	772665	183	117400	-106713	-2328098
323	AEÎ "Chetrocredit"	Chetrosu	Drochia	1105320	48	2647662	350	1153909	813288	110294
324	AEÎ "Cotova"	Cotova	Drochia	0	0	324135	46	0	225498	30394
325	AEÎ "Succesul Fermierului"	Mîndîc	Drochia	1606604	67	1758056	180	0	406267	36852
326	AEÎ "La Căsuţi"	Cosăuţi	Soroca	0	0	55534	12	0	50716	-25492
327	AEÎ "Zguriţa"	Zguriţa	Drochia	0	0	236820	46	0	255987	51823
328	AEÎ "Eco-Clas-Credit"	Şeptelici	Soroca	0	0	131210	34	81826	64543	11476
329	AEÎ "Bulboci"	Bulboci	Soroca	0	0	137400	29	0	140297	21341
330	AEÎ "Marinici"	Marinici	Nisporeni	0	0	579945	64	0	538266	94257
331	AEÎ "Glia din Crocmaz"	Crocmaz	Ştefan Vodă	0	0	479498	138	307431	243196	39398
332	AEÎ "Pomuşor"	Tocuz	Căuşeni	0	0	210396	42	139958	97313	6404
333	AEÎ "Bani-Garaprim"	Lipnic	Ocniţa	219156	55	957744	192	798079	-195437	-253554
334	AEÎ "Columna Manta"	Manta	Cahul	2624949	60	3712035	384	721148	922351	205602
335	AEÎ "Oneşti-Credit"	Oneşti	Hînceşti	0	0	458434	66	224000	406226	20678
336	AEÎ "Ştefan-Vodă-Bogzeşti"	Bogzeşti	Teleneşti	0	0	246800	53	165299	104647	-4101

337	AEÎ "Şercani"	Şercani	Orhei	0	0	30000	2	0	49007	8033
338	AEÎ "Nucăreni"	Nucăreni	Teleneşti	0	0	101488	78	18925	177419	7227
339	AEÎ "Victoria-Sărătenii Vechi "	Sărătenii Vechi	Teleneşti	0	0	272258	29	319508	196263	130
340	AEÎ "Băneşti"	Băneşti	Teleneşti	0	0	95200	19	0	497064	126893
341	AEÎ "Văsieni"	Văsieni	Ialoveni	0	0	53833	6	31950	113246	26909
342	AEÎ "Vălcineţ"	Vălcineţ	Călăraşi	0	0	377720	48	80185	290635	30545
343	AEÎ "Temeleuţanul"	Temeleuţi	Călăraşi	0	0	397172	51	277729	91814	-6238
344	AEÎ "Sipoteanca"	Sipoteni	Călăraşi	0	0	99675	72	292000	-262568	19609
345	AEÎ "Alexeevca"	Alexeevca	Ungheni	0	0	0	13	0	64655	-38211
346	AEÎ "Iurceni"	Iurceni	Nisporeni	0	0	179850	38	57594	180295	30232
347	AEÎ "Olăneşti"	Olăneşti	Ştefan Vodă	0	0	53000	10	0	31956	-611
348	AEÎ "Purcari"	Purcari	Ştefan Vodă	0	0	44181	4	0	13393	-7773
349	AEÎ "Chioselia-Rusă"	Chioselia Rusă	UTA Găgăuzia	0	0	1900	2	0	3113	-51453
350	AEÎ "Cociulia"	Cociulia	Cantemir	0	0	157518	79	0	169991	10721
351	AEÎ "Lăpuşna-Credit"	Lăpuşna	Hînceşti	0	0	6146	2	0	31557	-1462
352	AEÎ "Vaiba-Com"	Gura Camencii	Floreşti	0	0	0	34	290563	-313435	-2518
353	AEÎ "Valuni-Com"	Caşunca	Floreşti	0	0	4990669	534	3967088	-4694100	-4908071
354	AEÎ "Chişcăreni"	Chişcăreni	Sîngerei	0	4	189242	27	110000	601958	167433
355	AEÎ "Musteaţa"	Musteaţa	Făleşti	0	0	51970	12	22	82704	-36751
356	AEÎ "Brăviceni Credit"	Brăviceni	Orhei	0	0	19266	67	0	69716	41318
357	AEÎ "Mileştii Mari"	Mileşti	Nisporeni	0	0	165140	11	70953	157011	9398
358	AEÎ "Ghecrial Sistem"	Dubăsarii Vechi	Criuleni	2489822	75	1449797	300	60237	-1700970	-1790871
359	AEÎ "Limbenii Noi"	Limbenii	Glodeni	0	0	343000	51	306921	57551	14830

		Noi								
360	AEÎ "Microfin"	Chişinău	Chişinău	429200	7	625197	32	5000	364867	101509
361	AEÎ "Făleştii Noi"	Făleştii Noi	Fălești	0	0	148464	29	62900	156954	29279
362	AEÎ "Cobani"	Cobani	Glodeni	0	4	251350	41	172830	102814	24590
363	AEÎ "Cajba"	Cajba	Glodeni	0	0	1237925	208	738795	589046	199127
364	AEÎ "Prut-Văratic"	Văratic	Rîşcani	1412960	36	3580351	86	3258474	102275	-593352
365	AEÎ "Fincordan"	Caracuşenii Vechi	Briceni	0	0	115000	61	149000	-231881	-817763
366	AEÎ "Voşca"	Sănătăuca	Floreşti	0	0	8552	118	106211	77803	-7156
367	AEÎ "Soroca"	Soroca	Soroca	1595801	21	3827897	513	1448619	1075618	68743
368	AEÎ "Giurgiuleşti"	Giurgiuleşti	Cahul	0	0	400100	54	325618	103599	5344
369	AEÎ "Business Credit"	Căuşeni	Căuşeni	2433996	25	2270344	190	0	320977	66799
370	AEÎ "Rezina-Credit"	Rezina	Rezina	1822262	21	1872175	212	0	613975	-41184
371	AEÎ "Călugăr"	Călugăr	Fălești	0	4	112500	15	0	206247	36623
372	AEÎ "Zăicani-Fin"	Zăicani	Rîşcani	0	0	0	0	746696	-989231	-338277
373	AEÎ "Corlăteni"	Corlăteni	Rîşcani	0	0	2106387	240	1810429	413092	104309
374	AEÎ "Ivanovca-Fin"	Ivanovca	Hînceşti	0	0	223396	26	75500	55841	21102
375	AEÎ "Mîndreşti"	Mîndreşti	Teleneşti	1010100	33	1164750	125	0	330589	17032
376	AEÎ "Han-Credit"	Hansca	Ialoveni	0	0	0	0	0	9444	0
TOTAL				**93370651**	**5851**	**244245431**	**32152**	**94903465**	**75297483**	**-13673603**

Appendix C: Summary Statistics, using the observations 1:1 - 3:7

Variable	Mean	Median	Minimum	Maximum
N_of_borrowers	1810.38	1288.00	209.000	6715.00
Loan_size	3191.05	2219.00	958.000	10178.0
WoR	0.252628	0.00964360	0.00100000	1.41667
PaR30	0.0257857	0.0117000	0.000000	0.152400
OSS	2.31878	1.98469	0.560939	4.86419
ROA	-0.0272398	0.00982555	-0.337800	0.0659000
ROE	0.0444616	0.168364	-0.500000	0.466919
PM	-0.100335	0.0589000	-1.05690	0.228922
OER	0.243550	0.216359	0.128362	0.586340
Yield	0.559845	0.365664	0.0819024	1.20643
Age	6.37143	6.00000	0.800000	12.0000
Cost_of_Funds	0.255434	0.136465	0.0100000	0.668566
Variable	Std. Dev.	C.V.	Skewness	Ex. kurtosis
N_of_borrowers	1673.90	0.924609	1.56010	1.81989
Loan_size	2366.03	0.741457	1.66489	2.13112
WoR	0.425264	1.68336	1.52015	0.971978
PaR30	0.0347491	1.34761	2.52085	6.51091
OSS	1.35690	0.585179	0.595864	-1.04923
ROA	0.111014	4.07544	-2.03798	3.14727
ROE	0.288262	6.48340	-0.539855	-0.872042
PM	0.426467	4.25044	-1.41147	0.522527
OER	0.120477	0.494670	1.45000	1.76847
Yield	0.385074	0.687822	0.668335	-1.16322
Age	3.20268	0.502662	-0.0986814	-0.864272
Cost_of_Funds	0.235756	0.922962	0.649583	-1.19168